

QUARTZ



Quartz for Surveillance



Challenge:

Market abuse and manipulation have become rampant in parallel with the surge in trading volumes globally, making effective trade surveillance increasingly complex for financial institutions. This challenge is further compounded by factors such as heightened market volatility, the rapid proliferation of digital trading channels, and continuously evolving regulatory requirements.

Against this backdrop, organizations are compelled to adopt cutting-edge, next-generation technology solutions to proactively anticipate risks, uphold market transparency and integrity, and safeguard investor interests. Such measures play a critical role in strengthening investor confidence, thereby driving sustained capital inflows into the market and supporting its long-term growth

Solution

The Quartz Smart Solution for Surveillance helps Regulators, Exchanges, Central Securities Depositories and Brokerages proactively identify and address anomalies as well as manipulative and illegal trading practices within their ecosystems.

The solution continuously monitors trading behaviour, account activity and holding patterns against pre-defined rules, parameters and thresholds, generating real-time alerts for investigation by the Surveillance officers.

Designed for scale and flexibility, the solution offers comprehensive multi-asset and multi-market coverage, ingesting data from across the financial ecosystem in real time or at scheduled intervals via the Quartz Gateway.

Leveraging advanced AI/ML technologies, the solution efficiently detects anomalies and minimizes false positives by using labelled alert data for model training and optimization. It also uses natural language processing (NLP) techniques for extracting and interpreting insights from unstructured data sources such as news and market disclosures.

Quartz for Surveillance supports a comprehensive set of rule based and pattern based alerts covering a wide spectrum of market manipulation and abusive scenarios. An indicative list of such alerts is listed below:

- **Rule based alerts:**

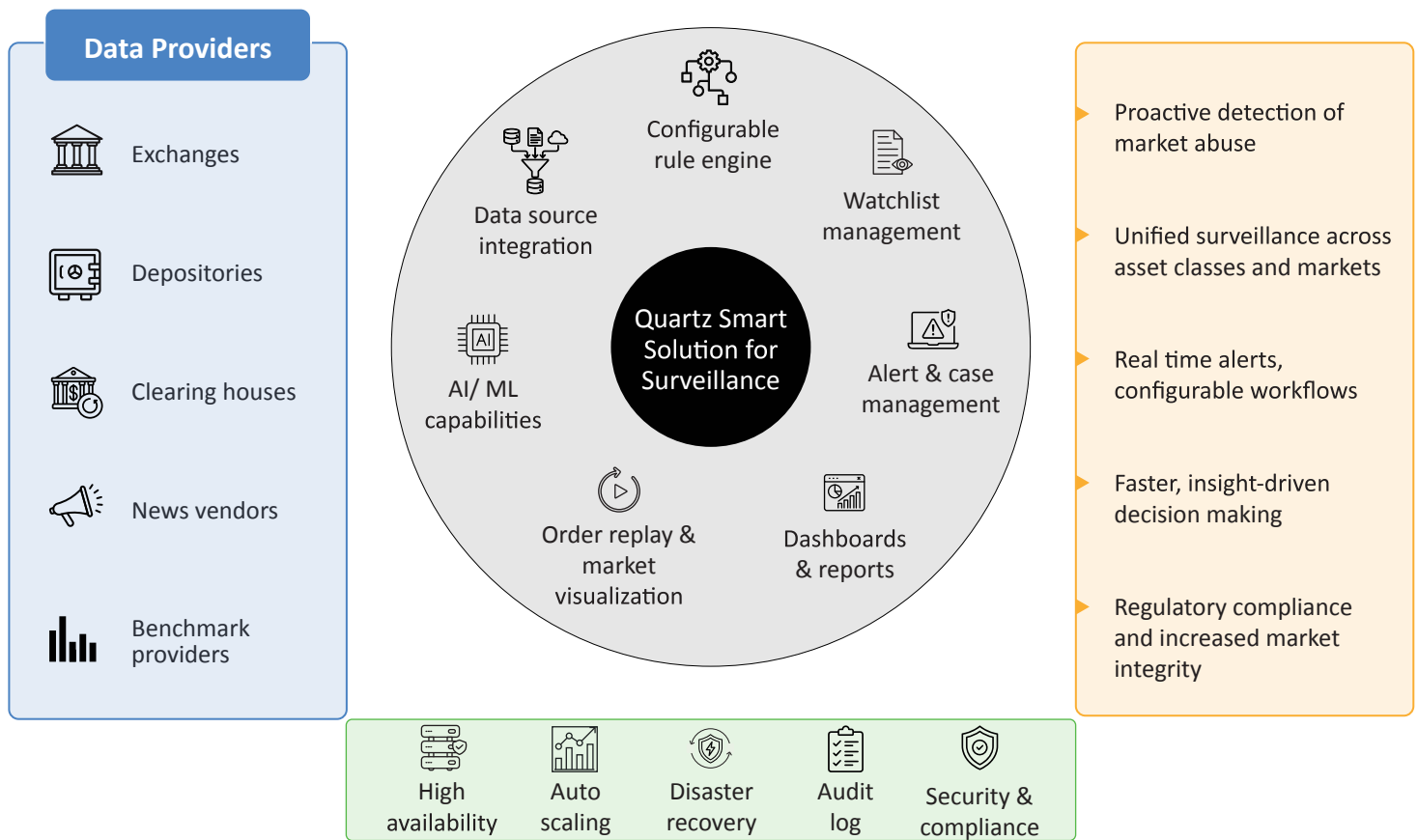
- Price movement/ volatility alerts
- Volume based alerts
- Liquidity alerts
- Order behavior alerts

- **Risk, compliance and operational surveillance:**

- Order to trade ratio
- Member exposure monitoring
- Volume/ turnover monitoring at member and client level
- Position limit monitoring
- Settlement fails monitoring
- Monitoring of off-market transaction patterns
- Ownership/ holding concentration

- **Pattern alerts:**

- Wash trades
- Marking the close
- Front running
- Collusion detection
- Circular trading
- Spoofing
- Synchronized trading
- Pump and dump
- Trash and cash
- Flashing of trading intent
- Quote stuffing



Benefits

- Seamless integration with data providers and newswires for the receipt of transactions, reference data, price, benchmark data and news
- Improves investigation effectiveness through end-to-end workflow for alert investigation, along with covert alerts for in-depth case investigation
- Enables real-time risk mitigation through early detection of suspicious activities
- Drives better decision-making by providing real-time insights and analytics that enable faster and more informed surveillance actions.
- Supports deep investigations through integrated dashboards and market replay along with drill down facility that enable detailed analysis of market and participant behaviour.

Quartz Advantage

- Multi-market support across Equity, Fixed Income, FX, Commodities, Derivatives, and Digital Assets
- Comprehensive market coverage through holistic monitoring across trades, orders, securities, participants, position and holdings.
- Online (real-time) and offline alert generation along with watchlist management for focused monitoring.
- Flexible and scalable framework through a configurable rule engine that supports evolving data sources and regulatory needs.
- Leverages AI/ML for identification of specific anomalies and recalibration of thresholds for rules
- Ability to create dynamic reports, summarization of unstructured data leveraging Gen-AI capabilities

About Quartz

Quartz offers innovation-led solutions that combine the benefits of DLT and AI. Built on the premise of 'trusted intelligence', the solution addresses business challenges across the entire value chain including development, integration, and governance of ecosystems for various industries including Financial Services, Banking, Supply Chain, Energy & Utilities and eGovernance. Backed by awards from Financial Technology Forum (Best Fraud Prevention Solution), SPM Excellence Award (by the Centre for Software and IT Management (CSITM) of Indian Institute of Management Bangalore), Asia Pacific Stevie Awards (Best Machine First Sanctions Screening), Juniper Research (Gold Winner for Digital Identity Innovation), the Asian Banker (Best Fraud Prevention Technology Implementation), Financial Technology Forum (Best New Post Trade Solution of the Year), Asset Servicing Times (Outstanding Innovation Award) and recognition from Analysts (ranked #1 Best Performing Fraud Management Solution by IBS Intelligence) Quartz can help organizations operate at the forefront of technology innovation

To know more about Quartz, please write to us at tcs.quartz@tcs.com, or visit our website <https://www.tcs.com/what-we-do/products-platforms/quartz>

About Tata Consultancy Services Ltd (TCS)

Tata Consultancy Services (BSE: 532540, NSE: TCS) is the technology partner of choice for industry-leading organizations worldwide. Since its inception in 1968, TCS has upheld the highest standards of innovation, engineering excellence and customer service.

It has set an aspiration to become the world's largest AI-led technology services company and is enabling its clients to transform themselves across the full AI stack, from infrastructure to intelligence.

Rooted in the heritage of the Tata Group, TCS is focused on creating long term value for its clients, its investors, its employees, and the community at large. With a highly skilled workforce spread across 55 countries and 202 service delivery centers across the world, the company has been recognized as a top employer in six continents. With the ability to rapidly apply and scale new technologies, the company has built long term partnerships with its clients – helping them emerge as perpetually adaptive enterprises. Many of these relationships have endured into decades and navigated every technology cycle, from mainframes in the 1970s to artificial intelligence today.

TCS sponsors 14 of the world's most prestigious marathons and endurance events, including the TCS New York City Marathon, TCS London Marathon and TCS Sydney Marathon with a focus on promoting health, sustainability, and community empowerment.

TCS generated consolidated revenues of over US \$30 billion in the fiscal year ended March 31, 2026.

For more information, visit www.tcs.com

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