# Kx for Surveillance

Holistic multi-factorial surveillance across First and Second Lines of defense.

Banks, exchanges and regulators around the globe are increasingly turning to Kx for a more dynamic approach to gaining insight into the behavior of multiple focus points including traders, clients, brokers, market participants and of increasing importance real-time monitoring of algorithms. Built on technology chosen by top global banks for their high frequency trading systems, Kx for Surveillance solutions are designed in collaboration with market participants to give analysts and business users a comprehensive view of relevant market activity.

The Kx platform captures and analyses massive amounts of information at the most granular level including but not limited to Trades, quotes, orders and market data, together with eComms and payments (for AML monitoring) - all on a single platform. Behavioral analysis together with out of the box and user-defined models, delivers a combination of risk based and dynamically calibrated alert based monitoring. Delivered with a complete library of MAR, eComms and AML models, new models can be added and easily incorporated into the comprehensive alert, workflow and case management infrastructure with full contextualized investigation tools.
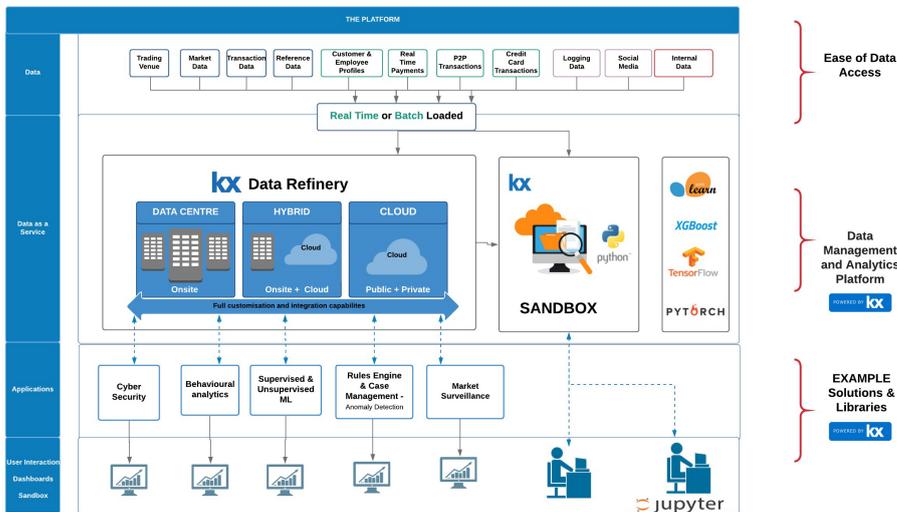
The solution is built on a comprehensive data management platform that ingests, validates and consolidates data centrally for consistent and correlated reuse across the enterprise and enabling it to be augmented with traditional and machine learning analytics.

Visualization dashboards give first and second line analysts tools to identify highest risk entities and get a deep contextual analysis of the causes of alerts. Scenario specific dashboards, such as market replay, used to reconstruct trading history, keep relevant data at analysts' fingertips. Importantly Kx for Surveillance is highly flexible, allowing new models, risk scoring techniques and visualisation of risks to be implemented either by the client or by Kx.

The Kx solutions for Trade, eComms Surveillance and AML can operate independently or in combination over a common Kx platform.

> Powered by the world's leading time-series analytics, modeling and machine learning platform

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At a Glance

The world's first integrated platform for multi-factorial detection and investigation of market abuse, financial crime and fraud.

Why Kx for Surveillance

A modular approach on a single platform

- **First and second lines of defense** -real-time, risk based, regulatory and holistic surveillance on the same platform.

- **Reduction in false positives** through dynamic behavioral analysis, risk profiling and alert calibration.

- **Extensive library of scenarios across all asset classes.**

- **eComms monitoring module** including flexible NLP.

- Incorporation of all major **Machine Learning** libraries supporting supervised and unsupervised learning.

- **Comprehensive workflow**, case management and reporting.

- Rich **contextual investigation** dashboards and ad-hoc data mining.

- **Configure to your own requirements** from analytics to models to workflow and reporting.

Fast Analysis of Big and Fast Data

Organizations that use Kx are able to unlock trading and payments data previously siloed in disparate legacy platforms. These large scale datasets are typically not easily accessed by business users. Kx is built on a unique time series database and analytics framework which brings vast amounts of data directly to the business user.

Dynamic Alerts Framework and Data Driven Benchmarks

Alerts Framework is a powerful and highly flexible engine using both real-time and Historical data. Alerts are generated by analysing events using out of the box or user defined models with configurable parameters. The resulting analysis is compared to historically calculated benchmark values and an alert is generated if the result exceeds the acceptable benchmark threshold. The Benchmark Framework automatically updates parameters within certain alert scenarios based upon region, product, trader etc. significantly reducing the operational overhead of configuring for different markets or regions.

Broad Regulatory Coverage

Kx scenarios are tested and proven over many years in some of the most challenging compliance environments. We have developed an extensive library of scenarios for detecting and alerting in potential cases of market abuse, insider trading and broader financial crime. Using Kx scenarios, our customers have improved their enforcement results across the board.

Case Management

Kx has a flexible workflow tool to cater to your organization's surveillance business processes. This case management framework allows clients to easily customize their alerts and case management workflows, capturing additional key information such as emails, announcements or any other relevant files.

About Kx

Kx has been the software leader for complex analytics on massive-scale streaming data for over two decades. The Kx technology is an established and trusted standard for trading, surveillance and research in financial services. Kx has emerged as the elegant, integrated solution to the analytic needs of the Pharma, Retail, Utilities and High Tech Manufacturing industries scaling effortlessly to the data challenges of the Internet of Things.

Kx is a division of First Derivatives plc. Listed on the London Stock Exchange [FDP:LN] First Derivatives is a specialist software and consulting organization with a uninterrupted track record of customer success and profitable growth since it was listed in 2002.

Improved Accuracy and Reduced False Positives

Regulators and bank compliance departments are dealing with ever increasing volumes of complex trading data which makes identifying anomalies difficult. With Kx it is possible to backtest many years of trading data to efficiently calibrate scenarios together with increased use of machine learning to maximise detection of irregular behaviour whilst minimizing false positives.

Dedicated Trade Surveillance Unit

Kx has a team of specialists with knowledge and experience in surveillance and trading. These experts will look at your specific trading data and your regulatory requirements, then tailor our solution to meet your specific needs. The Kx trade surveillance unit eases implementation without adding to headcount.

eComms Surveillance and Machine Learning

eComms Surveillance provides the ability to freely define lexicons driving Natural Language Processing to search for, extract, and lemmatize specified data and raise alerts based on user-configurable rules sets.

Enhanced Surveillance

Traditional surveillance techniques are based on monitoring and alerts for individual incidents of market abuse, which upon further review may lead to wider investigations, referred to as a bottom-up fundamental approach. Because Kx has the capability to look at vast amounts of data to find anomalies, business users can use a thematic top-down approach, which gives broader intelligence for monitoring market abuse.

Kx in Action

Visualize and Explore Data
- Kx Dashboards
- Kx Analyst

Control, Deploy & Monitor
- Control for Kx
- Stream for Kx
- Kx for Monitoring

Industry Solutions
- Finance
  - Surveillance
  - Algo
  - Flow
- Pharma
- Utilities & IoT

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