



NICE Actimize

SURVEIL-X Behavior

Protect Your Bottom Line and Reputation with
Predictive, Proven Conduct Surveillance

Misconduct can be costly

Your employees are your biggest asset. Most of time things go smoothly and they do the right things. But sometimes conduct issues arise, and they can be costly.

In recent years, misconduct has cost firms hundreds of billions of dollars, stemming from regulatory fines, litigation costs and reputational damage. This in turn has negatively impacted global bank profitability, stock returns and market valuations, and lending capacity. It's estimated that Britain's biggest banks alone paid out £71 billion for misconduct in the decade following the financial crisis.

But getting out in front of conduct issues isn't easy. There are many faces of misconduct, ranging from client and market abuse to rogue trading and aggressive selling. And the longer problems elude detection, the more damage they can cause. With so much at stake, early intervention is key.

Early Intervention: A Multi-Dimensional Challenge

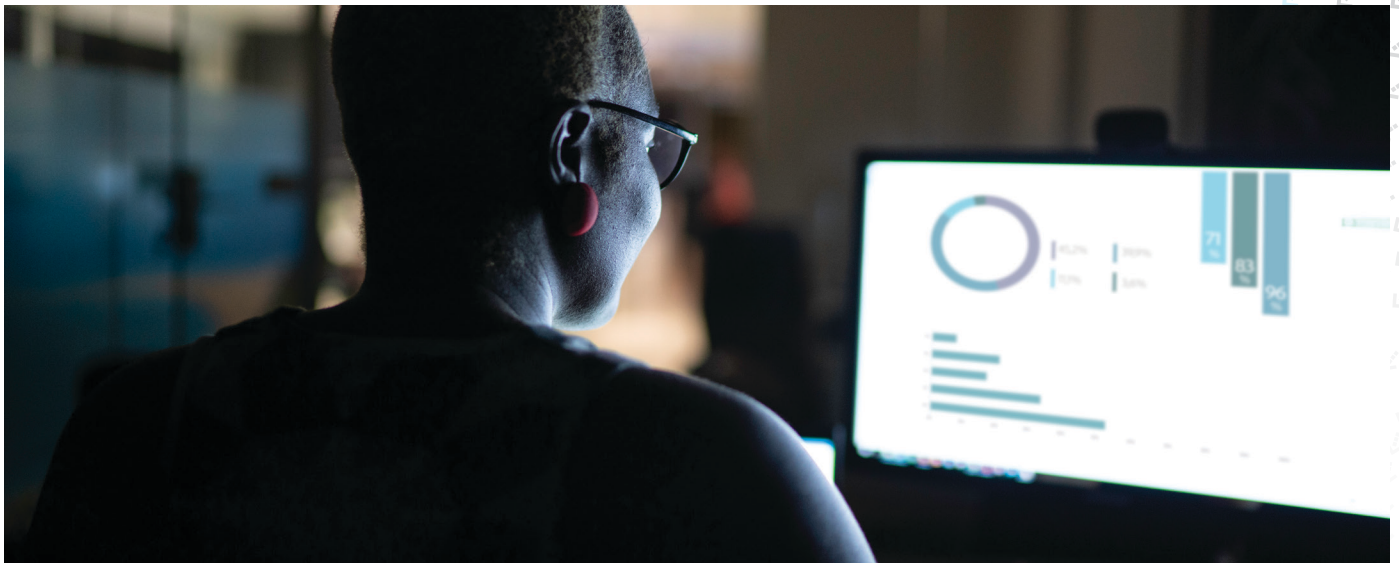
The fact is – while most firms have policies and procedures in place to detect such issues, today's surveillance systems are often ineffective in identifying the types of behaviors associated with conduct risk. Here's why:

1. Employee Behavior is Very Broad

Unlike market manipulation which is governed by specific regulations and where the typologies are clearly defined, employee behavior is a very broad area. This can make detection of conduct issues more complex because many factors and parameters may need to be monitored. Moreover, if someone wants to do something bad, they can devise creative ways to cover their tracks.

2. Focusing on Things that Have Already Happened

The key to mitigating losses and reputational damage from conduct issues lies in deterrence. But by definition, most surveillance systems are reactive. They are designed to detect issues only after they have already happened.



3. Too Many Alerts, Too Much Noise

Compliance analysts at tier one banks receive about 1,000 alerts a day, and over 99% of these turn out to be false. This deluge of alerts can overwhelm compliance resources. There's simply not enough time to investigate every flagged incident, so alerts may be ignored or dismissed. For example, in the case of notorious rogue trader Jerome Kerveil, Société Générale analysts missed 75 alerts between June 2006 and January 2007 and he was able to carry on with his scheme for over 2 years.

4. Surveillance in Silos

Surveillance and decision-making is all too often done in silos. This fragmentation of controls means there's no overall big picture view of regulated employee actions which would enable firms to accurately identify issues. For example, different systems may set off alarm bells when a trader breaches his volume limits, has unusual

patterns of cancellations or corrections, exhibits other deviations from normal trading patterns, or makes unauthorized P&L adjustments. But traders often talk (text or chat) about the trades they're doing too, and these communication alerts are captured in other systems. There's no way to automatically link all of this data together.

5. Excludes Behavioral Factors

Today's surveillance systems largely focus on trade execution or communication abnormalities, to the exclusion of behavioral factors. Yet there are hundreds of behavioral factors which could signal a likelihood of conduct risk. These range from deviations in work hours to atypical vacation time. For example, in the case of rogue trader Jerome Kerveil, several behavioral factors emerged. Kerveil had not taken vacation in over 2 years, maintained erratic working hours and accessed systems during non-working hours. All of these tell-tale signs were overlooked.

Introducing SURVEIL-X Behavior

Detect and Deter Conduct Issues, Intervene Early

Is your firm using surveillance for after-the-fact detection? To protect your firm from financial and reputational damage, you need a predictive, proactive, proven approach to surveillance that focuses on intervention and deterrence, not just detection.

- **SURVEIL-X Behavior** helps you identify and deter conduct issues before they get out of hand, preventing damage to your firm's reputation and bottom line.
- **SURVEIL-X Behavior** eliminates siloed decision-making by leveraging AI-powered predictive algorithms to analyze behavioral, trading and communications data.
- **SURVEIL-X Behavior** uses supervised and unsupervised machine learning, and correlates early warning signals from your behavioral, trade and communications data to prior confirmed instances of misconduct, to bring new conduct concerns to the forefront.

Now, instead of detecting conduct breaches months or years after they happen, you can deter them in advance, by proactively identifying regulated employees who have a propensity to act recklessly, or may require additional coaching, training, or remediation.



How SURVEIL-X works

1. What's Normal?

Using historical data and multi-dimensional analysis **SURVEIL-X Behavior** first establishes profiles of normal behavior for your regulated employees (focusing on communication patterns, transactions and various behavioral factors).

2. What's Not Normal?

Using unsupervised machine learning **SURVEIL-X Behavior** then monitors employee behavior for patterns (anomalies) that fall outside of these normal profiles. **SURVEIL-X's** powerful AI engine uses multi-dimensional analysis to monitor for key risk indicators across trade data, communications, and employee behavioral factors. (See chart below for examples.) Your firm can analyze hundreds of risk factors based on its unique conduct risk definitions and needs.

Multi-dimensional Analysis: Sample Criteria

- Not taking vacation
- Back office background/experience
- Unusual access to office systems
- Atypical working hours
- Trading limit breaches
- Unusual patterns of cancellations and corrections
- Unusual trading patterns
- Recommending products not fitting client needs
- Trading in products that create a conflict of interest
- P&L that exceeds a certain de minimis or unusually large one-day P&L reports
- Aggressive communications
- Channel switching
- + much more

3. Behavioral Scoring

SURVEIL-X Behavior uses the results of the above analysis to create an aggregate conduct score for each regulated employee. This score quantifies each employee's relative conduct risk based on a variety of factors, providing an accurate risk profile without any inherent bias. At your firm's discretion, factors considered serious can be weighted more heavily in the aggregate score.

4. Alerting, Understanding and Action

Compositive scores are presented to supervisors via alerts and behavioral dashboards. Supervisors can drill down into data to understand why alerts were raised. Armed with this information, supervisors can take preventative action, such as coaching or re-training an employee, launching an investigation, or putting an employee under heightened supervision.

Powered by AI

Built on NICE Actimize's multi-decade experience in financial compliance, **SURVEIL-X**'s powerful AI technologies leverage our vast historical misconduct database, along with your regulated employees' new behavioral, trade and communications data, to accurately detect and predict misconduct. Our three-prong approach to surveillance and AI combines Anomaly Detection, Natural Language Processing and Alert Prediction to help your firm identify and address the root causes of misconduct.



Anomaly Detection

Anomaly detection is a key part of **SURVEIL-X**'s next-generation behavioral surveillance. Anomaly detection applies unsupervised machine learning to spot otherwise undetectable suspicious behavior patterns, like communications or trading activity that's outside of the norm for a specific account, portfolio manager or trader.

It does this by establishing benchmarks of normal behavior, and then comparing this behavior to new trends in data and alerts over time. For example, is a trader suddenly sending fewer emails, perhaps in an attempt to fly under the radar? Or has a trader's daily profit increased drastically without a valid explanation?

Another important aspect of assessing conduct risk is having the ability to look at behavior comparatively and over time. A trader who breached her credit limit one time might not be viewed as risky as one who breached it four times in the past.

SURVEIL-X can also run an analysis to identify how a particular employee's sentiments or emotions are changing over time, and if negative behaviors that can potentially lead to misconduct are building.



Alert Prediction

Alert prediction is a form of predictive analytics which uses AI to transform data into insights. From its analysis of past alerts, **SURVEIL-X** can accurately predict the outcome of new alerts, reducing noise and false alerts by up to 70 percent, and significantly improving the efficiency of your compliance team.

When presented with new alerts, **SURVEIL-X**'s alert prediction algorithm accurately predicts the outcomes, so higher priority, true alerts can move up the work queue.

Drill-down dashboards remove the mystery of AI by providing complete explainability and confidence scores for every alert – including why a prediction was made, and what factors contributed to it.



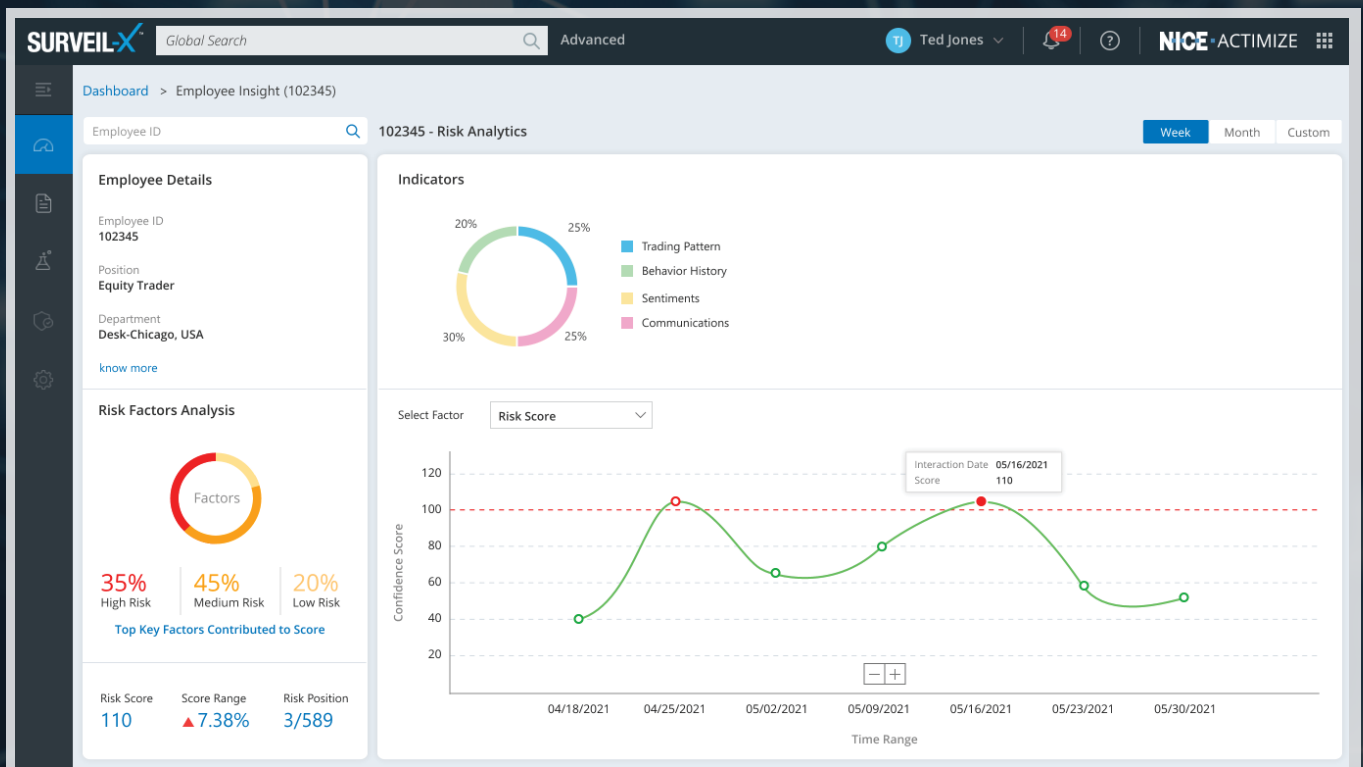
Natural Language Processing (NLP)

NLP is the third area of AI where **SURVEIL-X** clearly excels. **SURVEIL-X**'s NLP understands and analyzes communications, automatically detecting people, places, products, companies, trades, assets classes and conversation topics to reveal what really happened.

With NLP, it's possible to see how people are interacting with one another, who they're interacting with and how frequently, what they're saying, and how they're saying it, by extracting context and sentiment from communications. This, in turn, can surface potential issues and provide an early warning to supervisors when behaviors aren't fitting normal or acceptable patterns.

Fine-tuned for financial markets, **SURVEIL-X**'s NLP can even detect jargon indicative of inappropriate sales practices, or aggressive behavior.

NLP can identify and alert to: negative sentiment; signs of fear, aggression and short-temperedness; pushiness on the part of a financial advisor; mistrust; client confusion and hesitation when discussing products; and even overuse or misuse of technical jargon which can be hard for customers to understand. All of these things can impact morale and customer perceptions of your brand. NLP can identify these problem interactions for a closer look.



SURVEIL-X Behavior Dashboard

SURVEIL-X Behavior Benefits



Reduces conduct risk, deters employees before they can act



Insulates your firm from reputational damage and fines



Reduces noise and false alerts that can cause mistakes or bad behaviors to be overlooked



Leverages AI and multi-dimensional analysis of a wide range of data and behavioral indicators



Behavioral detection identifies otherwise undetectable issues for higher level of protection



Effective detection and alerting for early intervention



Improves efficiency of compliance analysts

Ready to Start Your AI Journey with SURVEIL-X?

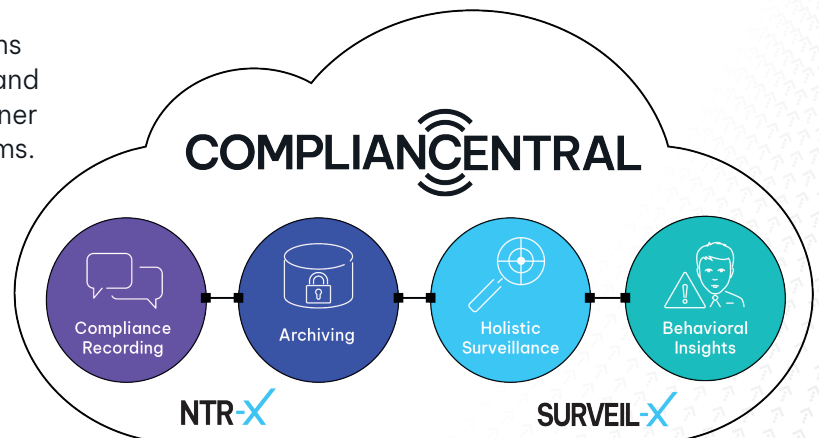
As the largest and broadest provider of financial crime, risk and compliance solutions for regional and global financial institutions, NICE Actimize can help with your AI questions and needs.

Our supervised and unsupervised machine learning solutions are already in use at leading financial institutions. Our broad expertise means we're equipped to help you understand where and how to apply AI and machine learning in a manner that can add value to your surveillance programs.

We're also here to assist with your data quality and other inherent challenges.

Finally, our surveillance solutions remove the mystery of AI by providing complete explainability of alerts with drill down dashboards.

SURVEIL-X is Part of
Compliancentral, The First
End-to-End Communication
& Trade Compliance Suite



Know more. Risk less.

About SURVEIL-X

NICE Actimize's SURVEIL-X Holistic Conduct Surveillance offers unparalleled compliance coverage for online brokers, buy-side and sell-side firms, insurance companies, crypto exchanges, regulators and more by enabling accurate detection and rapid, thorough investigation of market abuse, inappropriate sales practices, employee misconduct and other compliance issues to insulate firms from fines and reputational damage.

About NICE Actimize

NICE Actimize is the largest and broadest provider of financial crime, risk and compliance solutions for regional and global financial institutions, as well as government regulators. Consistently ranked as number one in the space, NICE Actimize experts apply innovative technology to protect institutions and safeguard consumers' and investors' assets by identifying financial crime, preventing fraud and providing regulatory compliance.

The company provides real-time, cross-channel fraud prevention, anti-money laundering detection, and trading surveillance solutions that address such concerns as payment fraud, cybercrime, sanctions monitoring, market abuse, customer due diligence and insider trading.

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