NICE's New Approach to Financial Markets Compliance

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Compliance challenges

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In this e-book we would like to share a high-level overview of NICE's Financial Market Compliance approach. We have developed this approach to help financial firms deal with complex compliance issues based on our extensive 30 year experience providing compliance solutions to all of the major banks in the world.

Integrating both structured and unstructured data from many different, standalone sources, and then standardizing and coordinating it for analysis, is a difficult, yet critical requirement to understanding risk.

Unprecedented investigations, enforcements, legal costs and settlements.

New regulations are being added and they are more granular and prescriptive than the ones they replace, for example, the requirement to "…maintain the specified records in a manner that readily accessible via real time electronic access…"

The structure of the market is changing with increased electronic trading , new trading venues, asset classes and instruments and more cross-market and cross-product activity.

The current siloed approach to compliance, that looks at markets and communications separately, leaves big gaps between them where risk can hide.

New communication methods – skype for business, text, and the constant stream of new social media apps – make it harder to understand the extent of the manipulative behavior.

Market manipulations continue to get more sophisticated as rogue traders find new ways to get around existing regulations.

The timeframes for regulatory responses are getting shorter such as Dodd-Frank's 72 hours for a full-trade reconstruction.

COMPLIANCE CHALLENGES

From traditional to holistic approach

NICE FMC's holistic approach means

THE END OF NOT KNOWING

Traditional Approach

Holistic Approach

NICE FMC's holistic approach to regulatory, reputational and operational risk management means the end of not knowing what is happening at your firm.

Using our extensive communications and trade surveillance experience gained by deploying our solutions at all of the major banks, including yours, our unique analytics look at the entire trade life-cycle, across all of the different technology you are using to support trading, to reveal a higher level of understanding and certainty than previously possible with individual technology or manual processes. We proactively find and minimize the risk hidden in data and in gaps between trading, markets and communications by cross-referencing and correlating behaviors and events. We uncover suspicious patterns and relationships that other vendors' siloed approach would not find. Holistic means looking at what was said as well as what was done and comparing them.
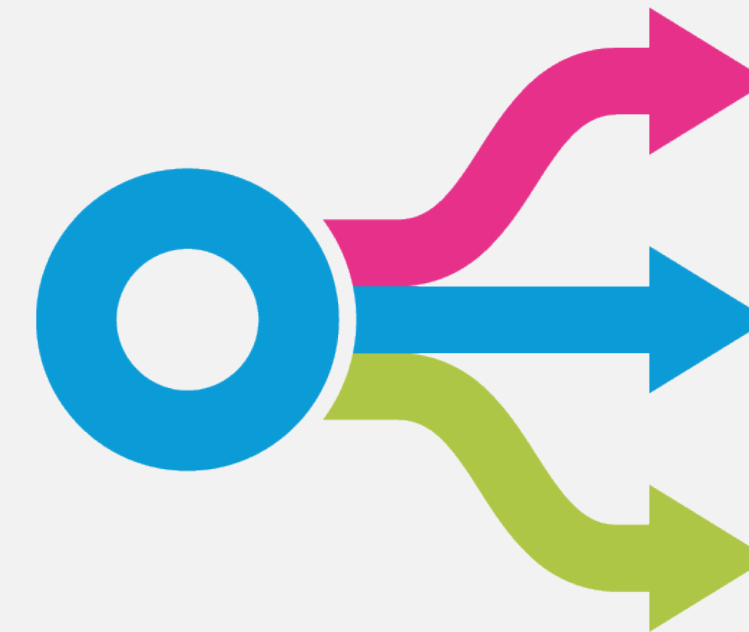
From traditional to holistic approach

Our holistic approach is different than traditional approaches on these dimensions:
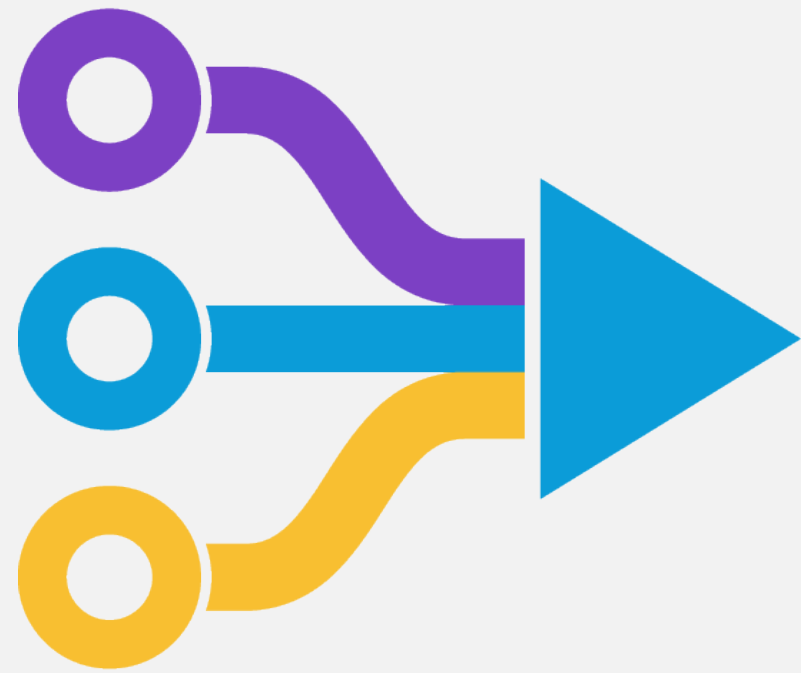
It's integrated rather than siloed, that is, it cuts across actions and intent for all asset classes, instruments, markets, communications and regulatory jurisdictions including market data and news, trades/executions, orders, positions, phone call, texts, instant messages, chat sessions and social media tweets and posts.

It's predictive and preventive rather than isolated and reactive. The predictive aspect helps you identify risk as it is developing and enables you to gain insight into what is going on in your business.

It's proactive rather than reactive. While the traditional approach is after-the-fact and always trying to catch up with events that have already happened, the holistic approach identifies nascent trade behaviors and communications and assesses possible intent.

It enables firms to fully demonstrate their investigations to regulators, meeting the Dodd-Frank requirement for "a complete audit trail for conducting comprehensive and accurate trade reconstructions…", rather than doing this partially or not at all.

How it works

How does our holistic approach to Financial Market Compliance work?

First, it brings together data on everything relevant to what your traders do and say – trades, executions, access to the building – from many sources. Then it adds external data like market news to provide additional insight.

Next, it applies a library of out-of-the-box, peer-driven analytics to the aggregated data.

The analysis results in insights which enable compliance officers to clearly understand risk and determine the appropriate actions to resolve identified exceptions and show what's been done.

ACT

ANALYZE

AGGREGATE

Our unique analytics
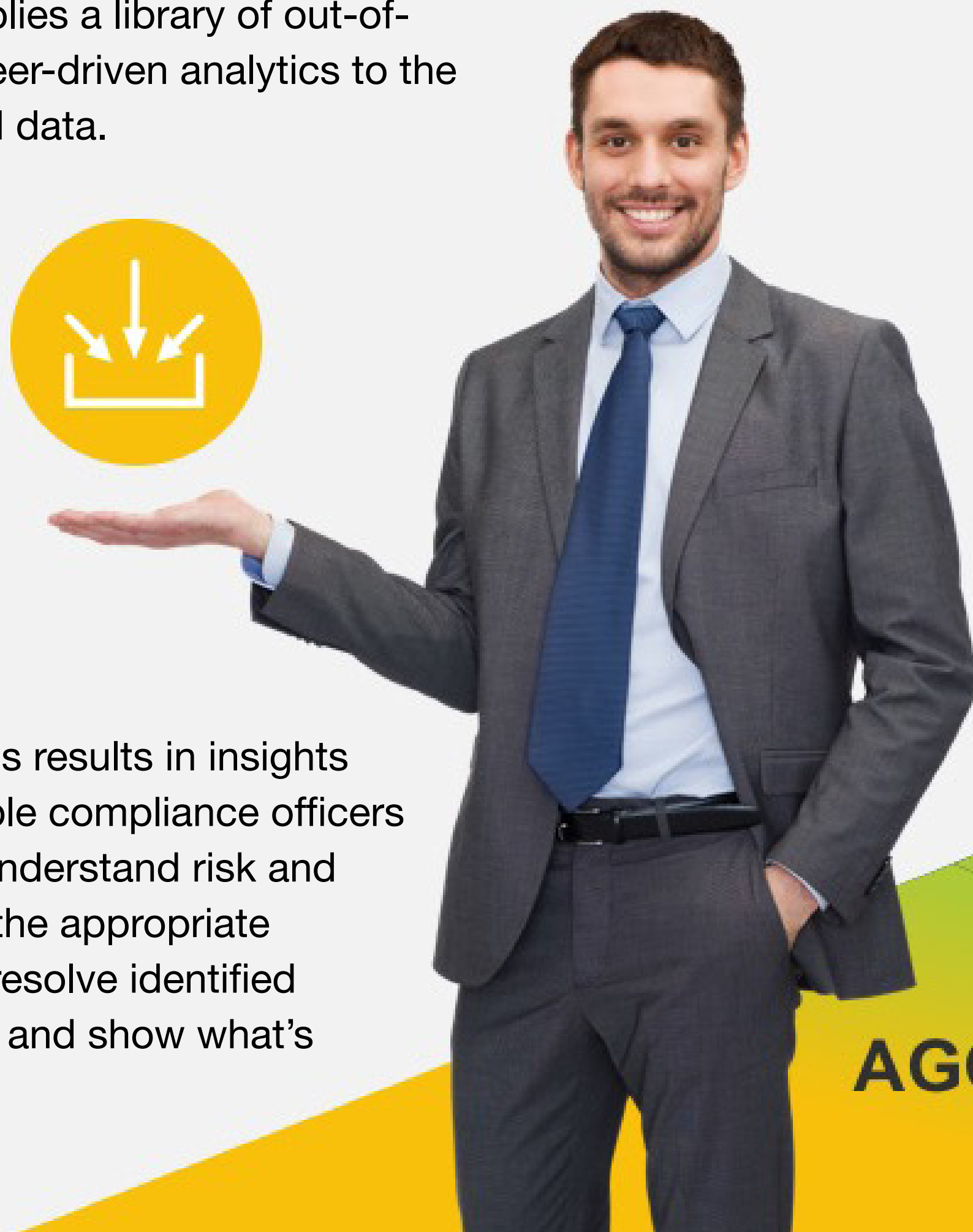
Our unique risk , communication and behavior analytics come from over 30 years of working closely with financial firms on risk management.

## OUT-OF-THE-BOX LIBRARY OF RISK SURVEILLANCE MODELS

Our library of out-of-the-box surveillance models are so extensive after so many years of experience working with financial institutions that they are quick and easy to set up and use.

PEER-DRIVEN ANALYTICS

They are peer-driven, that is, they are developed, tested and proven over the last 30 years with your peers.

MOST EXTENSIVE VOICE ANALYTICS

We have the most extensive and accurate library of voice and communication analytics (breadth, quality, deployments) and the broadest range of language support proven at thousands of customers globally.

TAILORED OTC ANALYTICS

Our behavioral analytics detect unusual behaviors and determine potential risk, helping compliance officers identify and possibly stop manipulative behavior before it has a chance to do significant damage.

SYNERGISTIC ANALYTICS

Lacking the transparency of formal exchanges, OTC markets are often targets of manipulation. Because of this, they are coming under increased regulatory scrutiny. While most vendors focus on exchange-traded analytics, NICE Actimize has over 14 years of experience with OTC analytics.

BEHAVIORAL ANALYTICS

Because our analytics take everything into account around an incident, including orders, executions and trades, all related communications, market news and the synergies among these, they are able to identify risk that siloed approaches overlook and also with a higher level of certainty that previously possible.

PREDICTIVE ANALYTICS

Our predictive analytics highlight potential risk of emerging issues rather than after-the-fact.

UNIQUE ANALYTICS

More sophisticated compliance process

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Our holistic approach is the first to enable a more sophisticated compliance process – one that is **more flexible, more dynamic, more intelligent, more efficient**. It identifies and prioritizes more elements of risk, more quickly than other solutions, alleviating false positives and the risk of false negatives. It **detects risk with more certainty** using pattern recognition and predictive analytics and prioritizes it on an intelligent risk-weighted basis.

FLEXIBLE
DYNAMIC
INTELLIGENT
EFFICIENT

MORE SOPHISTICATED COMPLIANCE PROCESS
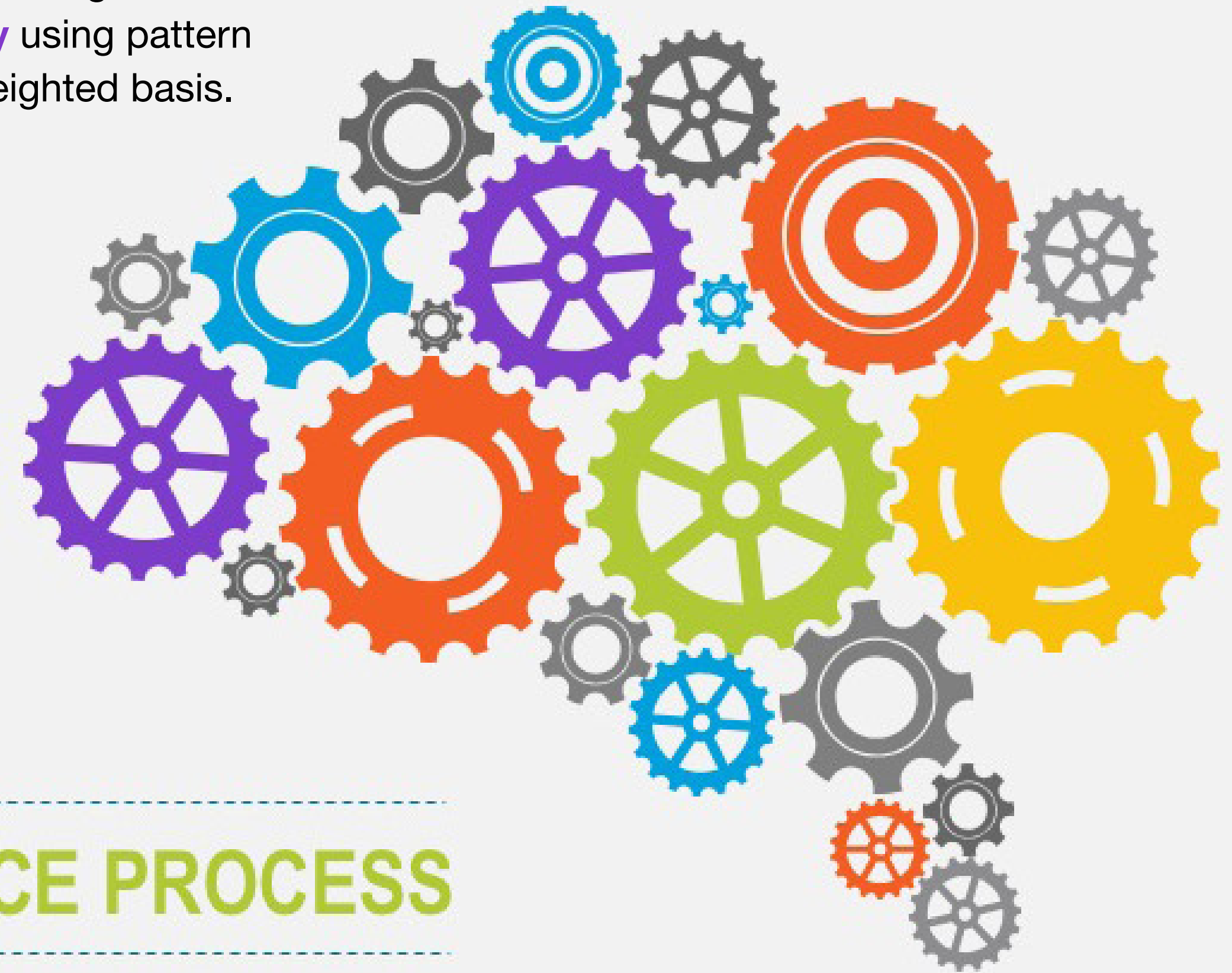
While most solutions are either at the order and/or execution level, or at the communications surveillance level, our holistic compliance framework reduces the gaps between markets and communications by integrating both in a single view. *It helps financial firms overcome the daunting challenge of compliance integration, standardization and coordination.*

Holistic Surveillance - Fundamentlly transforms compliance

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Our holistic approach is brought to life in our Holistic Surveillance solution.

THROUGH THE FASTEST, MOST PRECISE IDENTIFICATION AND MITIGATION OF COMPLIANCE RISK

Simply put, it fundamentally transforms compliance by providing the fastest, most precise identification and mitigation of compliance risk. This means integrating markets and communications surveillance to generate more accurate alerts. It means applying specialized analytics that cross-reference and correlate trading behaviors, communications and market news to come up more precise risk scores than ever before. And it means using technology, domain expertise and process best practices to give your firm the best possible advantage in regulatory, reputational and operational risk management.

Holistic Surveillance

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The NICE Holistic Surveillance Solution provides a flexible framework for risk management made up of three layers: AGGREGATE, ANALYZE and ACT.

ACT

| Case Management | Supervision | Full-Order Lifecycle | Audits | Dashboard Recording |
| Trade Visualization | Policy Mgmt. | Workflow | Alerts | Trade Reconstruction |

ANALYZE

| Behavioral | Cross Channel | Network |

| Speech | Lemmatisation | | Swaps | Equities | FI | Options | Cross Market |
| Stemmification | NLP | Text | FX | Communication Correlation | | Futures | Information Barriers |

AGREGATE

Voice Archives

Data Lake- Hadoop/Unified Data Manager

| Voice | Mobile | Unified Comms. | HR Data | Video | Chat | Social | Email | Market Data | Market News | Trans-actions |

Holistic Surveillance

NICE®

3

The ACT layer makes compliance analysts more productive by giving them everything they need in one place to fully review, investigate and determine the appropriate actions on identified high-risk activities, eliminating many time-consuming, manual actions. It also lets them demonstrate to internal auditors and regulators proof of compliance, that is, that they have captured, identified, reviewed, investigated, and acted appropriately.

The ACT layer delivers full trade reconstruction, uncovering risks that won't be found by siloed solutions. It enables compliance analysts to manage the information throughout its lifecycle.

The ACT layer also provides advanced trade visualization of market and firm activity including trades, market news, and communications so that analysts can easily see activities in relation to each other, e.g. to see if trades are impacting the market, so that they can fully investigate an issue without going to external systems like Bloomberg terminals and provides more evidence around intent.

| ACT | Case Management | Supervision | Full-Order Lifecycle | Audits | Dashboard Recording |
| | Trade Visualization | Policy Mgmt. | Workflow | Alerts | Trade Reconstruction |

2

The outputs of the analytics engine – alerts, data points, correlations and behavioral insights – are then fed into the applications.

ANALYZE	Behavioral		Cross Channel			Network	
	Speech	Lemmatisation	Swaps	Equities	FI	Options	Cross Market
	Stemmification	NLP	Text	FX	Communication Correlation	Futures	Information Barriers

1

Starting at the bottom of this diagram, the AGGREGATE layer captures, aggregates, cleanses, structures, standardizes, enriches and manages data from multiple, disparate data sources. Next, the ANALYZE layer applies unique analytics, developed and proven at hundreds of banks across the world, to uncover insights and understanding.

| AGREGATE | Voice Archives | | | Data Lake- Hadoop/Unified Data Manager | | | | | | | |
| | Voice | Mobile | Unified Comms. | HR Data | Video | Chat | Social | Email | Market Data | Market News | Trans-actions |

Identifying collusion

1 We now want to talk about how the industry is identifying manipulative behaviors today, using collusion as an example, and then contrast that with how NICE's Holistic Surveillance solution would identify these manipulative behaviors. In this example, trader 1 is acting in collusion with traders 2 and 3 at other firms banging the FX market during the fixing period. Trader 1 is engaging in suspicious trade behavior as well as communications preceding, during and following the trading behaviors.

Firms initially identify collusion in different ways – some find it through suspicious trade behaviors while others find it through suspicious communications but none find it with both.
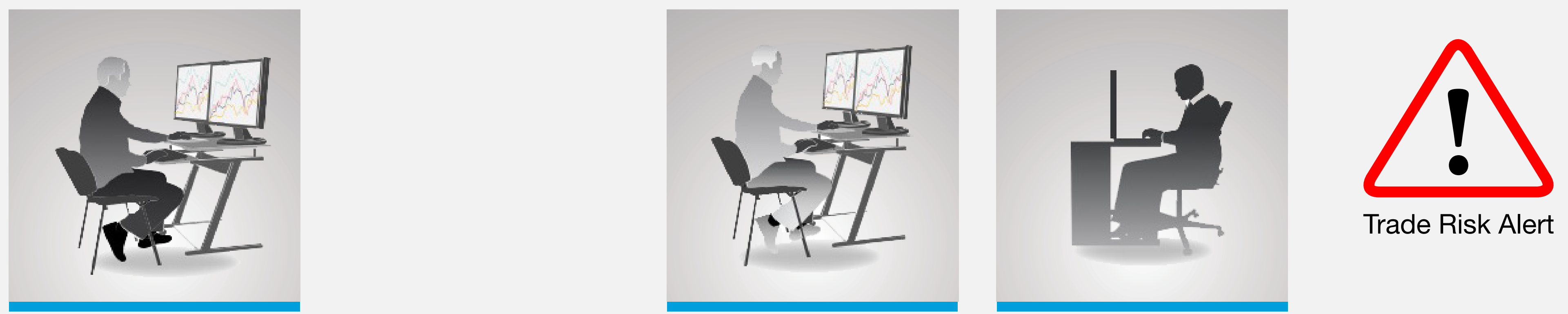
Trade Risk Alert

2 Today, most firms have NICE's or another company's market surveillance system that identify, analyze and alert on suspicious trade behaviors by their traders.

Identifying collusion

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Email Risk Alert
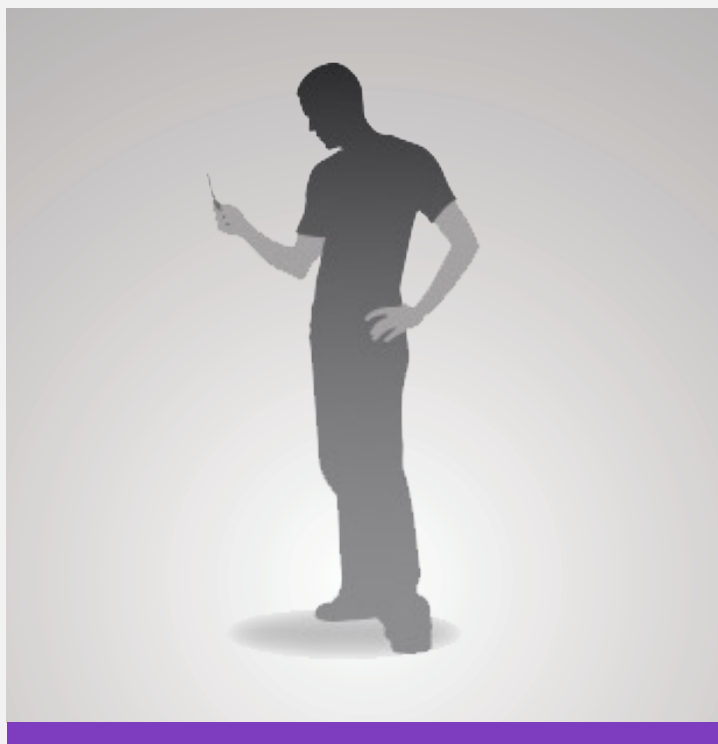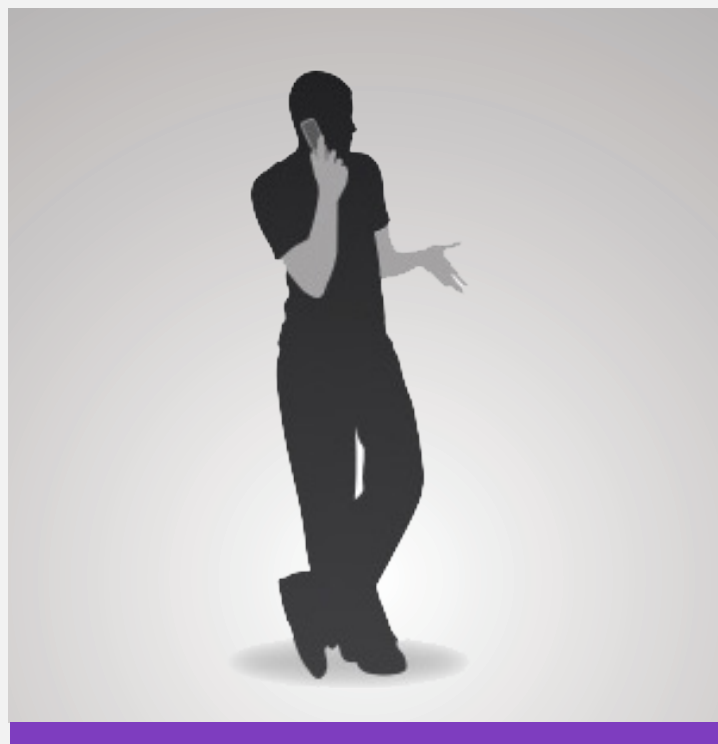
3

Many firms also have at least some communications surveillance capability, typically email or chat. But none have voice surveillance or integrated communication surveillance covering all communications methods. Of course, when colluding, traders are going to exploit the communications methods that they know are not being surveilled.
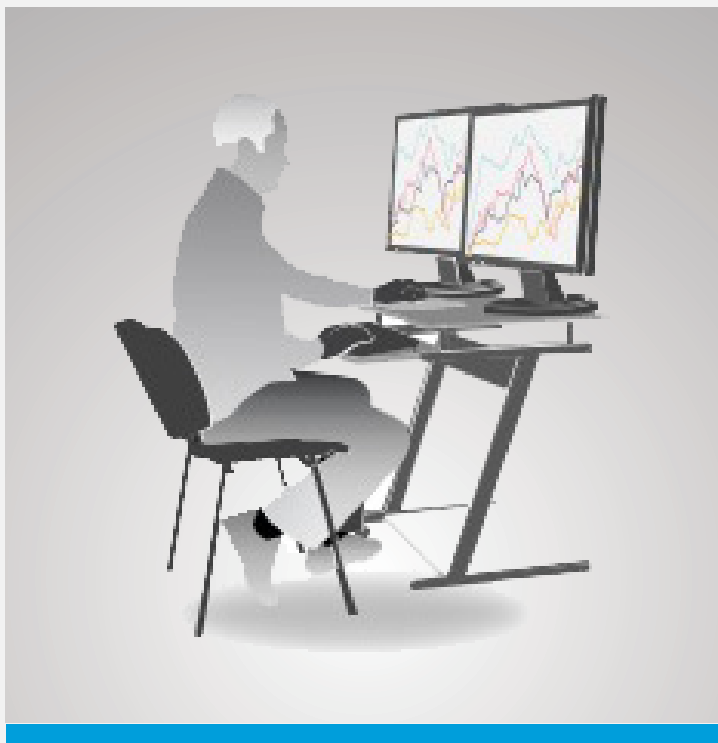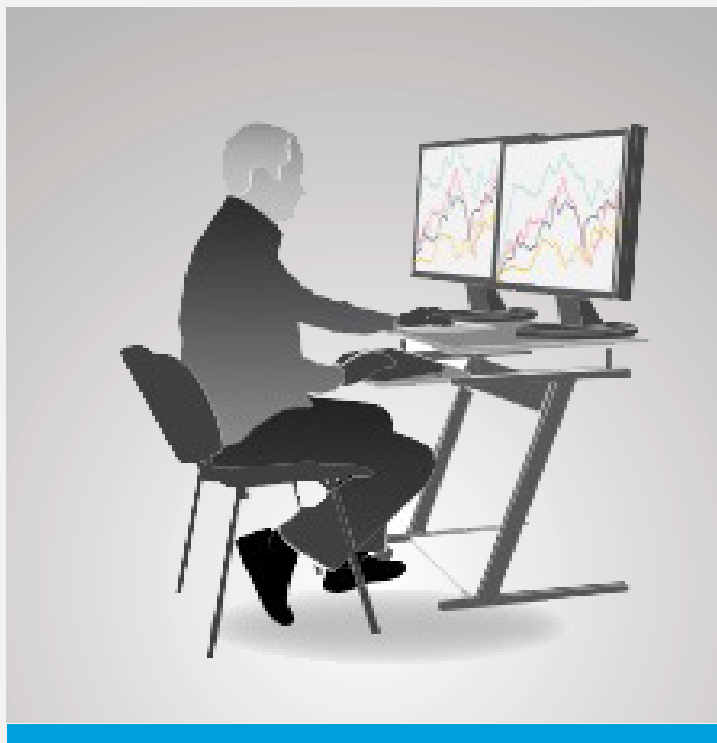

Email Risk Alert

Trade Risk Alert

4

Armed with the trade risk alert on trader 1's suspicious trading behavior and the email risk alert, firm 1's compliance team sets out to investigate the case. This is a manual process that typically involves listening to a large volume of calls and reading through all available ecomms to get a good handle on the suspected manipulative behavior. Even after all this effort, the compliance team more than likely only has a subset of the actual communication that are not integrated with dealer 1's trading behaviors. His missing communications could be critical to ratifying what the compliance team has already heard or filling in missing information that ends up leading them in a different direction. As you can see, this approach is time-consuming and has a high potential for error and/or omission.

Identifying collusion using holistic surveillance
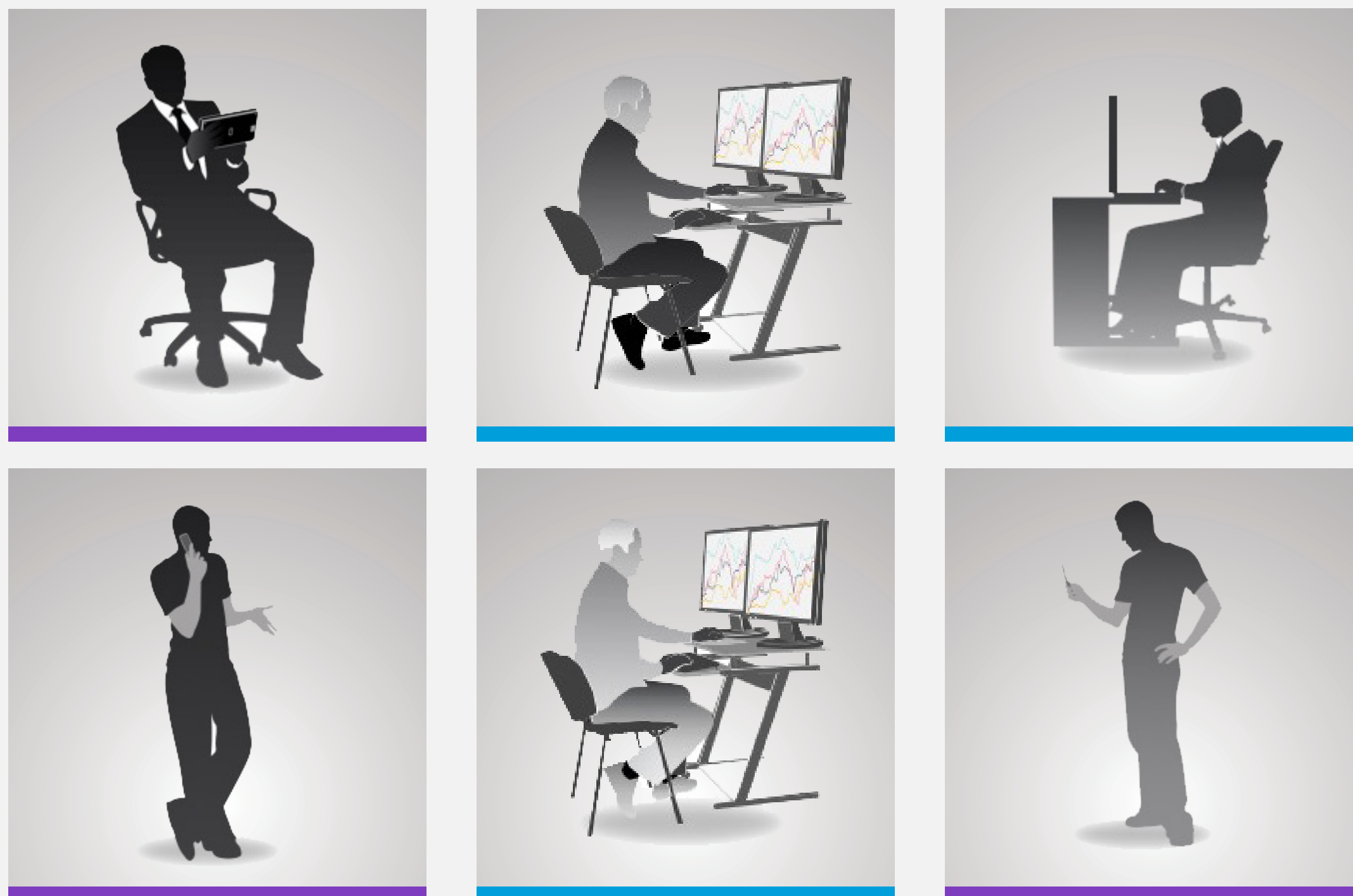
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SINGLE RISK ALERT WITH HIGHER CERTAINTY

HOLISTIC SURVEILLANCE SOLUTION **IDENTIFIES, ANALYZES & SCORES** SUSPICIOUS BEHAVIORS ON TRADER 1'S ORDERS, EXECUTIONS AND COMMUNICATIONS

By cross-referencing and correlating behaviors, events and communications, Holistic Surveillance proactively finds and mitigates risk hidden in data and in gaps between trading, markets and communications that individual analytics alone – whether for markets or communications – would likely miss.

Proven industry leader

NICE FMC is a proven industry leader in communications and markets surveillance with the largest global installed base including buy and sell side firms, all top firms and large regional players.

Industry Accolades

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Industry analysts and press recognize the innovation and excellence of our FMC approach and solutions

RiskTech 100 2016 — Category Winner Financial Crime – Single Category Leader for Financial Crime Risk Management by Chartis in 2016 RiskTech100® Rankings

Risk Awards 2016 — Winner – 2016 Operational Risk Technology Product Of The Year (Sell Side)

CIOReview — 2015 "Top 20" Most Promising Compliance Solution Providers

CELENT — Cited in 2015 "Market Surveillance Systems for the Sell Side and the Buy Side Slated for Growth" Report

Aité — NICE Actimize: Leader in Case Management, North American Large Financial Institution (FI) Market, 2015

NICE Actimize: Leading Vendor, Trade Surveillance Compliance Market, 2015

TABB GROUP — NICE Actimize Cited for Holistic Surveillance Capabilities, Unmatched Voice Analytics in GRC "Data Tsunami" Report, 2015

waters rankings 2015 — Best AML Compliance Solution - Winner 2 Years In A Row: 2014, 2015

WSL Awards Winner — NICE Actimize named "Most Innovative Use of Technology," 2016, 2015

FTF — FTF (Financial Technologies Forum) 2015 Winner - Best AML/Anti-Fraud Solution

Winner – Gold Standard Award for Best Cutting-Edge Solution for FX Trade Surveillance

Tens of thousands of organizations globally rely on NICE solutions

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NICE is a publicly-listed (NASDAQ: NICE) company with 2015 revenue of nearly $1B and more than 25K customers globally across multiple businesses. Our core focus is capturing customer's disparate data and then analyzing it to uncover new insights – something that they didn't know before - that could help them solve a difficult problem or potentially even transform their business.

PUBLIC SAFETY	FINANCIAL CRIME & COMPLIANCE	CUSTOMER INTERACTIONS

~150 COUNTRIES
~25K CUSTOMERS

$1B in Non-GAAP Revenue

Founded: 1986
Employees: ~3,300
Local Offices: >35

What this means to you is:

1 We are going to be here for awhile and we are transparent.

2 While we may not have everything that another company has, we have the wear with all to develop and invest to continually advance our solutions to meet the current and future challenges.

3 Our solutions are proven and tested at your bank as well as thousands of our customers globally.
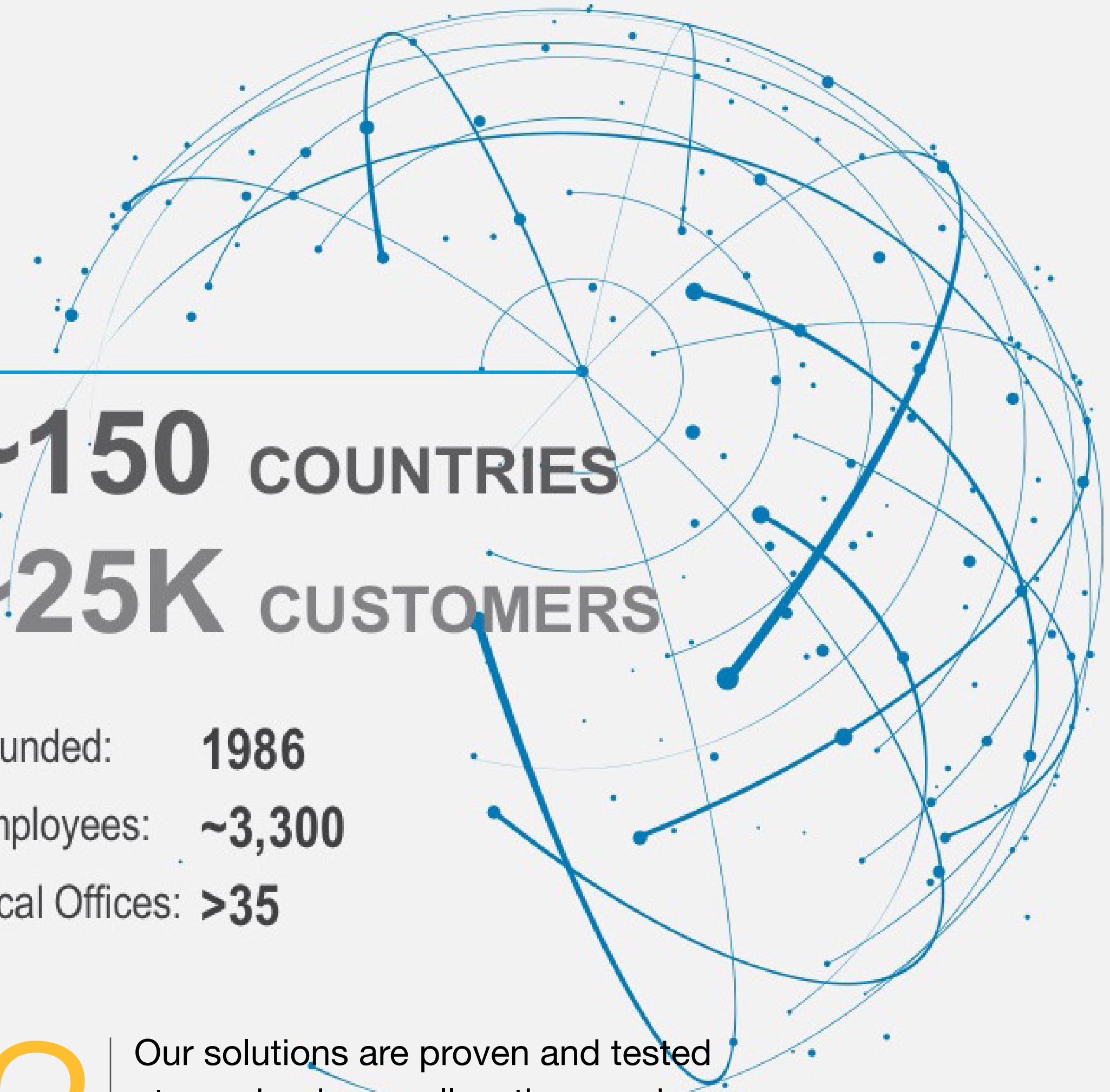
The end of not knowing

NICE®

The NICE Actimize holistic approach is designed to get your firm through the regulatory maze and to help you stay on top all of what your traders are doing and saying. While alternatives look at individual aspects of trades or communications, NICE FMC enables your compliance team to look at the entire lifecycle of an incident.

THE END OF
NOT KNOWING

1. As a result of our extensive experience over the last 30 years, we provide the **broadest range** of regulatory, reputational and operational risk coverage from trade to back-office transactions.

2. Our solution **goes beyond monitoring data, giving results and identifying exceptions to connect the dots that deliver conclusions and insight that siloed approaches can't provide.** Its management summary dashboards provide actionable business intelligence that highlight main areas of risk, for example, it can detect concentrations of issues by looking at weekly and monthly patterns, it can identify trends at the firm level and how they are changing over time. It makes information more readily available and easier for compliance analysts to digest. It gives executives what they need to quickly grasp what is happening in their business at the firm-level so that they can act on it.

3. W**e leverage existing NICE systems** to give you the advantages of a holistic approach at a lower TCO.

4. Our solution results in **less false positives** because it understands how to get the most out of the data already held in its systems in our formats, for example, voice recording, order execution market data, and reference data.

5. In addition to fewer false positives, one integrated solution instead of multiple siloed solutions leads to **increased compliance analyst productivity.**

    NICE FMC is the compliance market leader with the largest global installed base.

We'd love to hear from you!

To learn more:

visit us at www.holisticsurveillance.com

or e-mail us at:
fmc@nice.com