The State of Holistic Trade Surveillance

Benchmark Research Report

Q2/2020

JWG
Making sense of financial services regulation

NICE · ACTIMIZE

Contents

1. Introduction

Over the past few years, financial services firms have been investigating how to improve trade-related surveillance capabilities and techniques. Expectations from regulators and senior management have been placed under the microscope, mainly due to high surveillance noise levels across all communication channels and asset classes.

In tracking this evolution of technologies to meet these demands, JWG and NICE Actimize collaborated on the benchmark research study presented in this paper. The research explores an evolution of trade-related surveillance – starting at 'Random' and evolving to 'Siloed,' 'Integrated' and ultimately Holistic. The findings in this benchmark survey give the industry a way to evaluate their current state and target capabilities.

We have found that few firms are satisfied with the status quo and are investing in:

1. **Efficiency**: Reducing manual work is still the number one priority
2. **Integration**: Establishing a focus on bringing together siloed processes, data and systems
3. **Operating model**: Redefining key components of the operating model
4. **New technology**: Establishing and integrating AI and machine learning foundations.

We have drawn the following key conclusions from the survey data:

- Surveillance capabilities are still relatively immature today
- Half of the firms which indicate that they are still operating in siloes would like to operate with an integrated methodology inside of the next 18 months
- **67% of 'integrated' firms indicate that they are currently struggling with manually intensive processes for data management**
- **90% of 'integrated' firms state that they will continue to focus on becoming even more integrated**
- **13% of 'holistic' firms are still reliant on manual processes to manage lexicons.** None of them could indicate that they have fully integrated ontologies to contextualize information.

67%

90%

13%

However, with new technologies and regulatory developments on the horizon, these finding could shift significantly in the next 18 months. Key drivers of this shift will likely be:

- New compliance drivers like senior management accountability (e.g., SM&CR)
- Clarification from regulators on their technology expectations
- AI and ML techniques deployed for business growth which are leveraged for surveillance.

Additionally, more collaboration between firms, their suppliers and regulators is still required in order to define the appropriate reference technologies that will characterize a 'good digitized surveillance system' in 2030.

2. About the Research

JWG is a pioneering market intelligence company working with firms, technologists, and regulators since 2006 to help the industry comply with the ever-changing regulatory landscape.

From August to October 2019, JWG and NICE Actimize worked together to create and execute a survey to detail the key issues which define the capability levels of the market. In November the preliminary findings from our survey were discussed with a group of 18 financial institutions as part of JWG's Trade Surveillance special interest group which conducts eight meetings a year.

This research report draws conclusions from JWG's analysis of the survey results and feedback from the **30+ financial institutions (firms) that attended workshops in 2019**.

30+

3. Key Findings

Efficiency and Cost Savings Remain Top of Mind

When given the chance to pick between regulatory and efficiency drivers, efficiency and cost savings were shown to be top of mind for the survey respondents. In aggregate, senior management was primarily concerned with monitoring business risks – including AML and MiFID II obligations. However, when isolated, the single, strongest focus was on achieving cost reduction as shown in Exhibit 1 below.

Question: If your firm allocated 100 £/$/€/¥ to solving surveillance problems, how would you allocate budget? (The choices need to add up to 100)

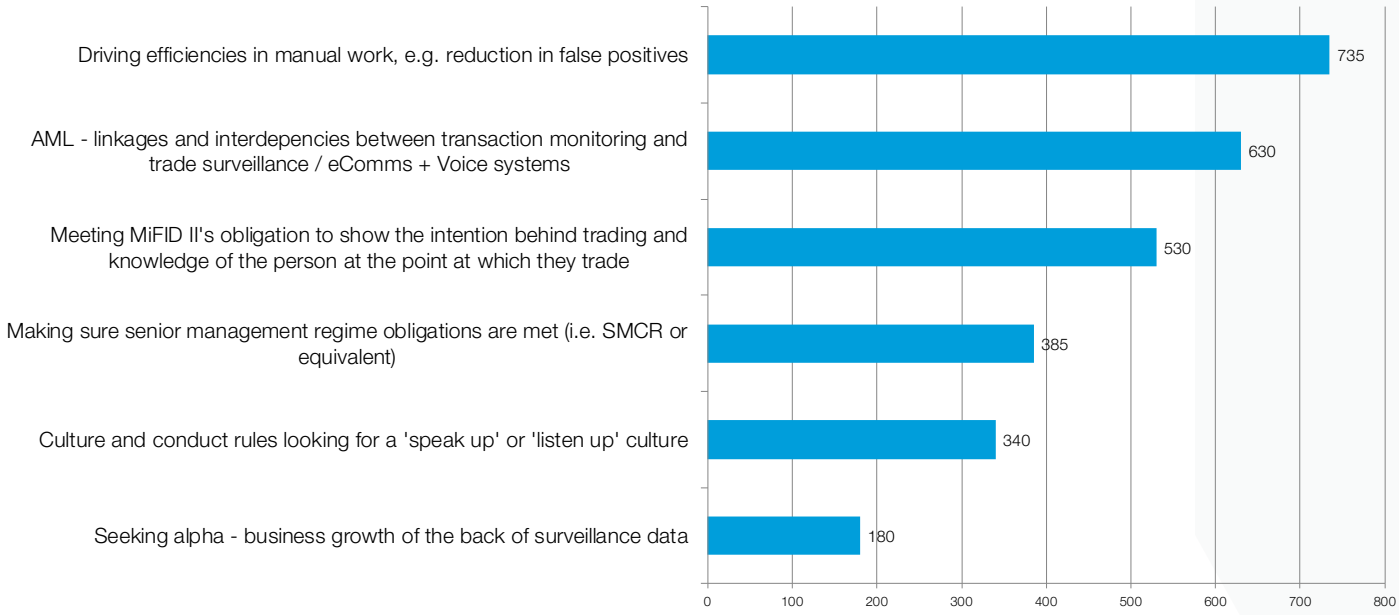


Exhibit 1: Surveillance priorities

Source: JWG Surveillance survey August-October 2019, JWG analysis

Firms are Focused on Near-Term Integration

42%

Overwhelmingly, firms responded that their target state will be 'integrated' by 2021 [60%, Exhibit 2]. Currently, **42% of firms are focused on bringing voice and eComms surveillance organizations together**. And 23% have focused on establishing a fully integrated surveillance model which combines voice, eComms, trade and conflicts of interest surveillance.

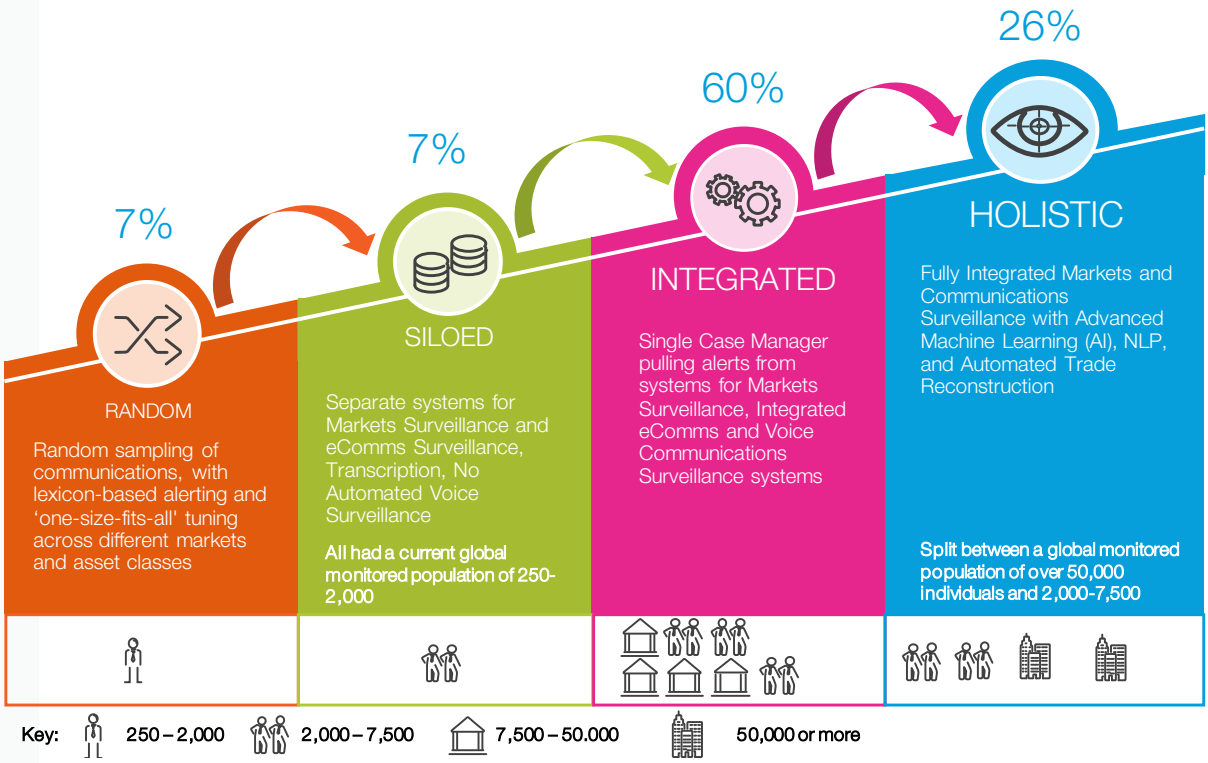


Exhibit 2: Target state by size of population monitored

Source: JWG Surveillance survey August-October 2019, JWG analysis - Key = size of population monitored

However, this state remains elusive for a significant percentage of firms today, as they have reported that they are generally struggling to link trade data to other data sets like voice. 33% of firms surveyed reported that do not have the ability to link their siloed data sets at all and 80% now rely on manual processes to get data into puddles for their analysis. Perhaps most tellingly, no firm could say that they have voice, ecomms and trade alerts integrated into the same case manager. 35% of firms use spreadsheets or ad hoc manual processes to enrich investigations with different data from other systems as needed. **65% utilize multiple case management systems**.

65%

Only a few firms have hard metrics or measures to manage the process holistically and data remains a big problem. A small percentage, 7% of firms, have hard quality metrics that are measured. They also have an equally small number of data quality owners who are responsible for ongoing improvement in their data quality. If data is a financial institution's biggest asset, this percentage shows that surveillance data is significantly undervalued by an overwhelming majority of firms.

In order to get to the desired target state by 2021, it is worth noting that firms will have to invest a significant amount of time and resources into the processes and data which will support this change.

Rethinking Key Components of the Operating Model

One of the most telling results of the survey was the lack of adoption around advanced technologies, such as Machine Learning and AI. Across the board, including the more advanced firms, all firms were shown to still be at the initial stages of incorporating these types of advanced technologies into their surveillance operating models, see Exhibit 3 below.

Capability	Initial	Repeatable	Defined	Managed	Optimized
Case Management	7%	29%	36%	29%	0%
Data Integration	0%	53%	27%	7%	13%
Source Breadth	33%	33%	27%	7%	0%
Surveillance Data Quality	13%	27%	47%	7%	7%
	14%	36%	34%	12%	5%

84%

Overview of responses per question:

Capability	Initial	Repeatable	Defined	Managed	Optimized
Case Management	Use of spreadsheets to manage cases	Ad hoc manual processes to enrich investigations with different data from other systems as needed	1,5 or 2 have a case management system pulling alert for Market Surveillance and Voice plus eComms	Separate case management system for each type of surveillance	Voice, eComms, Trade alerts all integrated to the same case manager
Data Integration	Ad hoc create of data sets	Manual processes to query/extract data	Automated routines to create data bundles	Curated, stand-alone data lake	Standardized lake which integrates with the firm's data ocean
Source Breadth	Traditional siloed systems – no real ability to link data sets	Trade data can be linked to other data sets (e.g. voice) on an ad hoc basis	Process in place to link data from time to time	Hard metrics to measure how we are actively linking and tracking across data lakes	All external social media, info, security, eComms, voice and trade
Surveillance Data Quality	No documented quality program	Ad hoc data quality measures are taken	Process in place to manage data quality	Hard data quality metrics are measured	Data quality owners take accountability for ongoing improvement of data vs. metrics

Exhibit 3: Responses to questions asked of holistic firms

Source: JWG Surveillance survey August-October 2019, JWG analysis

On the topic of intent and identification of previously unidentified risk, no firm indicated that they are using Artificial Intelligence or Machine Learning today. Instead, 42% of firms now rely on manual methods to detect intent in separate models for trading, voice and eComms. Somewhat concerningly, the remaining 58% stated that they are not creating models to detect intent required by MiFID II.

From a communications surveillance perspective, the majority of firms [55%] are using manual processes to enhance their use of lexicon-based search criteria. An equal number [18%] are relying on key words and taxonomies which can assist with more advanced detection. However, no firms indicated that they are taking an ontological approach that would help contextualize issues and identify outliers.

This low-tech approach to semantic technology would appear to be directly linked to the way alerts are managed. 75% indicated that they use rules to eliminate false positives. Interestingly, 34% indicated that compliance is enabled to define models on the fly to examine behaviors and receive alerts.

Perhaps the most telling indicator of immaturity in surveillance infrastructure today is the effort it takes to reconstruct information from the trade lifecycle. Although a legal requirement since 2007 with MiFID I, **84% of firms continue to rely on ad hoc or manual processes to link components of the trade lifecycle together**.

84%

Potentially more concerning for firms, manual methods resulting from the lack of adoption of these technologies have been shown to lead to gaps in coverage, slow delivery of regulatory requirements from MiFID II and Trade Reconstruction in tight timelines and have previously resulted in reputation damage and fines. In light of this and both internal and external pressures, firms should consider rethinking their surveillance operating models to incorporate new technologies and techniques when available.

Adoption of Advanced Technology

When asked about the appetite for investment around surveillance, regardless of the size of a firm's monitored population, firms are largely still experimenting with new technologies and talking to vendors in the marketplace, see Exhibit 4. As expectations start to shift, better foundations for holistic surveillance are being established.

Question: What is the firm's appetite for investment in new surveillance capabilities?

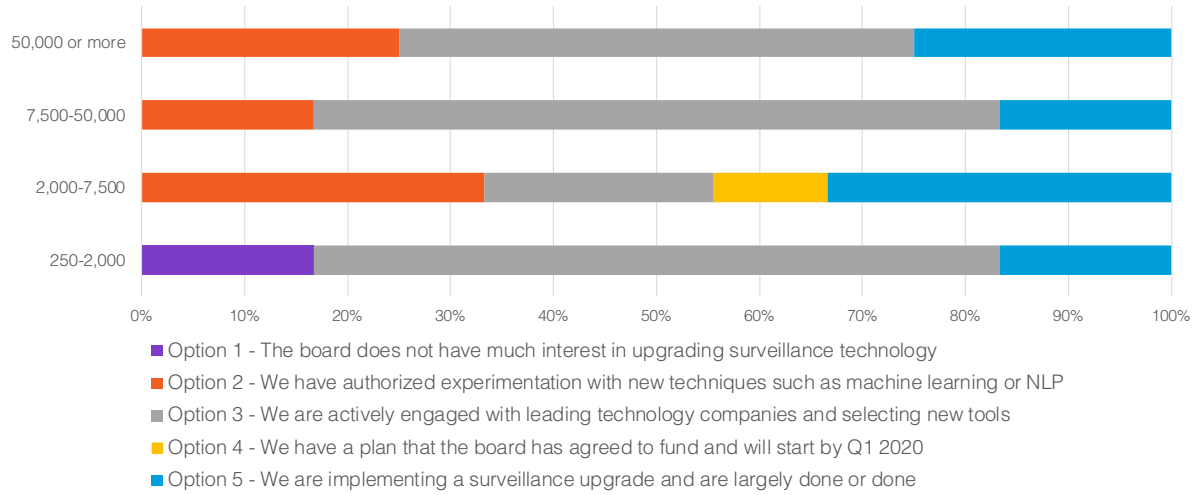


Exhibit 4: Firm appetite for investment in surveillance by monitored population size
Source: JWG Surveillance survey August-October 2019, JWG analysis

For firms with small populations of monitored users, the survey results confirm they are investing in surveillance capabilities related to solving process and data challenges. These firms are primarily focused on integrating the many different surveillance channels they have today and are consumed with system integration. Some boards have already approved investment, but the majority are still in the early stages of exploring the market for new technology.

For the firms with larger monitored populations, the appetite for adoption of new technologies is also significant. For firms with a monitored population of over 2,000 individuals, over 65% of firms across the higher tier bands are either actively engaged with firms with new technologies or are already implementing upgrades today. Perhaps driven by the digitization of platforms and adoption of similar ML, NLP and voice surveillance technologies in various customer-facing systems, it is easy to imagine that a priority for both front office and back office compliance investment could move quickly up the list for procurement.

65%

While a majority of firms have stated that their goal is to get to either integrated or holistic states in the near future, as indicated in the previous section, major barriers of making the jump from integrated to holistic surveillance include not having common data and systems in place across channels. These firms are still relying on manual processes for data management, which result in limited streamlined processes. Although neither easy or cheap, adopting these new technologies in various surveillance use cases will go a long way to improving processes and facilitating the holistic journey.

4. Conclusion

As shown throughout the research study, regardless of where a firm sees their surveillance operating model today, few are satisfied with the status quo. Regardless of size or the number of monitored users, all firms are investing in key changes to their operating model and looking to mature along the journey towards holistic surveillance.

Summary messages:

- The amount of progress on foundational work required to digitize processes and data will preoccupy compliance professionals for some time to come
- In the absence of any big drive from the regulators, firms will largely still be experimenting with new technologies and talking to vendors in an attempt to integrate unwieldy surveillance channels over the next couple of years
- Efficiency and cost savings are still top of mind today, but this could change with increased pressure from regulators or competition for high-margin revenue
- Success in deploying these same ML, NLP and voice technologies for commercial gain in customer-facing systems can help lead use case justification for surveillance
- Firms are placing a premium on getting the technology providers which understand the complexity of the surveillance landscape and ability to integrate into their complex environments.

It may be some time before truly integrated or holistic surveillance becomes the expected norm. However, as our special interest groups have discussed over the past year, three important new factors could accelerate this shift:

- New compliance drivers like senior management accountability
- More direct statements from regulators about their expectations which align with the technologies deployed a tier 1 institutions
- deployment of these technologies by firms for business growth.

Still, more collaboration is required between firms, their suppliers and regulators. Better defining best practices for organizing lines of defense, establishing robust data policies, and defining the appropriate reference technologies will help characterize a 'good digitized surveillance system' in 2030.

5. More About the Research

The survey was conducted between August and October 2019. 34 responses were received from a variety of financial institutions with very different sizes of populations under surveillance as shown in exhibit 5 and across 16 locations as shown in exhibit 6.

Question: What is the firm's appetite for investment in new surveillance capabilities?

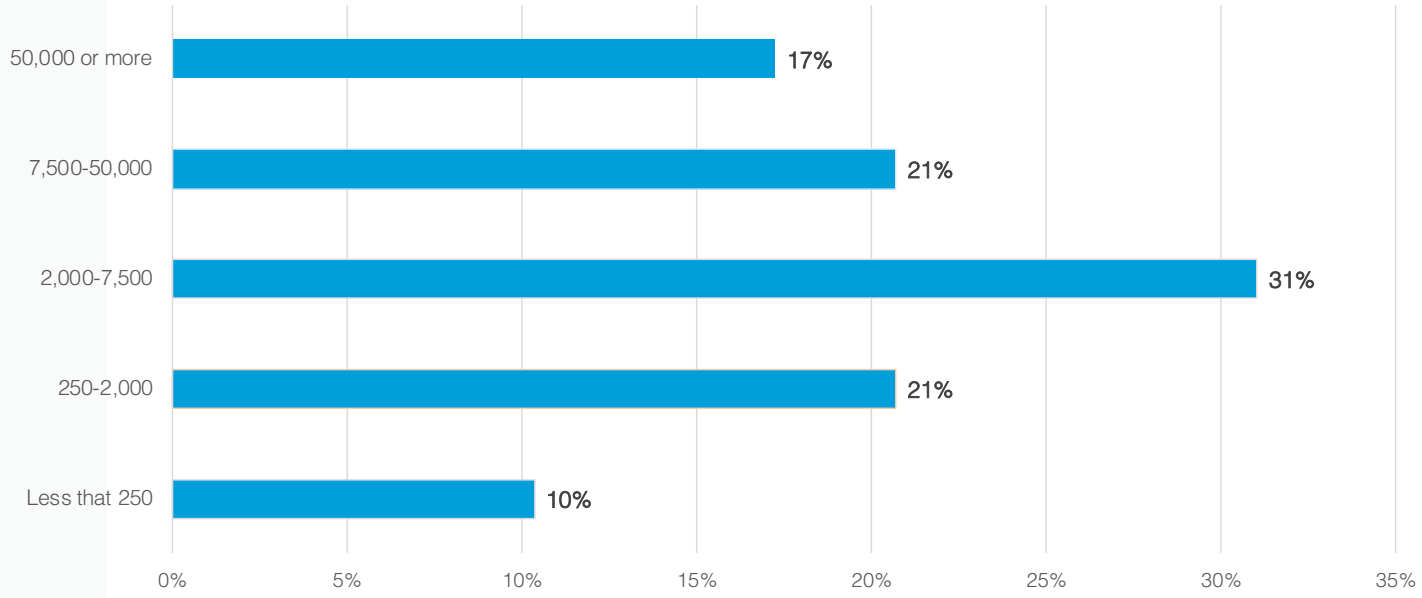


Exhibit 5

Source: JWG Surveillance survey August-October 2019, JWG analysis)

Question: Please indicate your country where your firm is headquartered

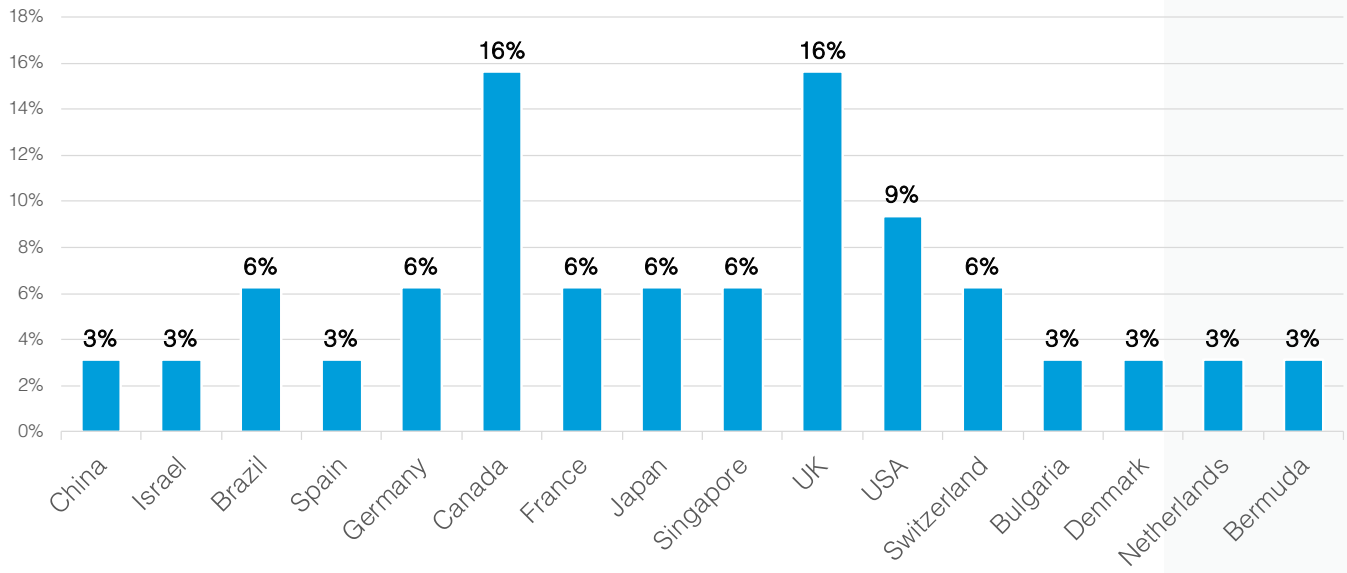


Exhibit 6

Source: JWG Surveillance survey August-October 2019, JWG analysis

The survey asked respondents to indicate which of the four types of surveillance capabilities they had today and then answer questions about their detailed capabilities within that category.

The capabilities are defined as:

1. **Random**: As random sampling of communications, with lexicon-based alerting with 'one-size-fits-all' tuning across different markets and assets classes

2. **Siloed**: Each business controlling their own Market Surveillance system and eComms and voice surveillance are owned separately

3. **Integrated**: A single case manager pulling alerts from systems for market surveillance and integrated eComms and voice communications surveillance

4. **Holistic**: Fully integrated markets and communications surveillance.

Exhibit 7 provides an overview of the capability model definitions and the average level of maturity for each model.

Initial	Repeatable	Defined	Managed	Optimized
Processes are typically ad hoc, and the business is relying on specific individuals to assure project success, and not on the use of proven processes.	The organization's processes are repeatable. Business objectives are "planned, performed, measured and controlled". Processes should be able to survive times of stress	The organization's processes are more organized and standardized. In this stage the scope and standards, process descriptions and procedures are greatly established in comparison to the 'repeatable' stage.	The processes can be adjusted and adapted to suit other business needs without the loss of quality. The performance of the process is controlled through quantitative techniques, setting a goal for both software processes and software maintenance.	The organization's processes accommodate new innovative technological improvements. Process improvements are continually identified, evaluated and deployed on an ongoing basis.

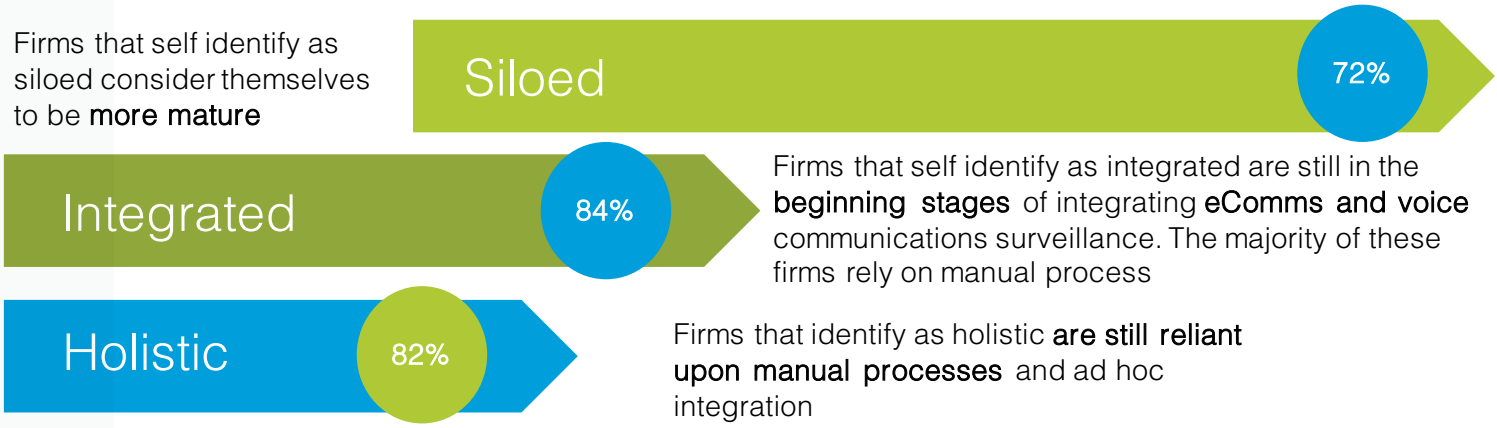
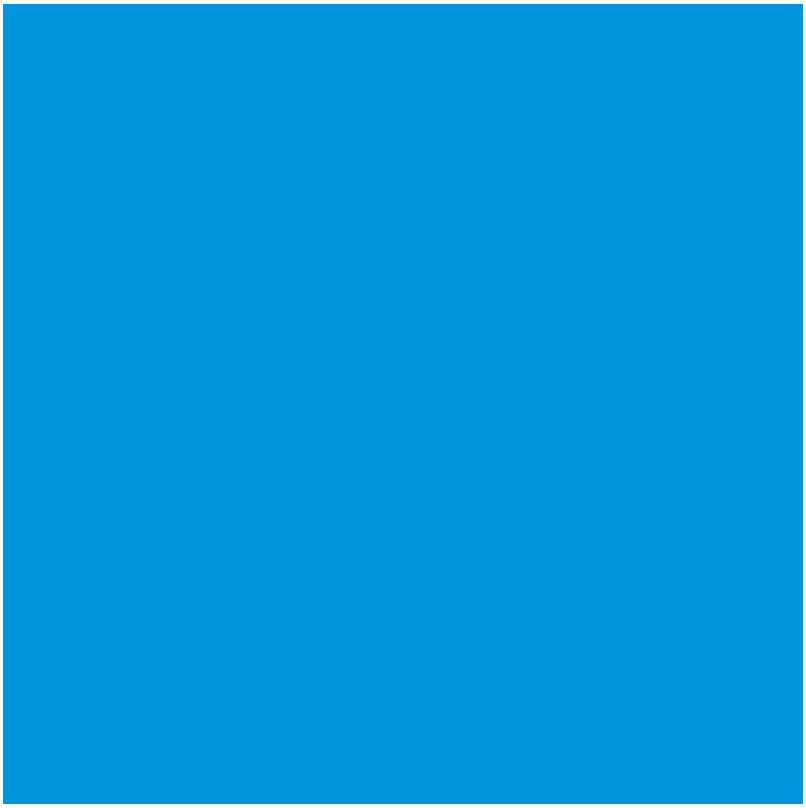


Exhibit 7

Source: JWG Surveillance survey August-October 2019, JWG analysis



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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