Traditionally, the testing aspects of a Compliance Management System (CMS) has been conducted in a “check the box” fashion, leading to “after the fact” or reactive discovery and analysis to identify compliance issues and control breakdowns. Due to the heightened regulatory scrutiny over compliance, an increase in consent orders and the pace of regulatory change, institutions are seeking assistance with CMS transformation initiatives to proactively identify and address compliance issues before they escalate to possible regulatory action. Conversely, there is broad pressure to lower compliance costs while seeking technology-enabled transformation opportunities to move beyond “check-the-box” testing focus and to provide more meaningful insights that translate into tangible business value.

At the cusp of this industry-wide transformation initiative is the early stage adoption of Real Time Compliance (RTC): a confluence of emerging technologies such as big data, machine learning, text-mining, and predictive and behavioral analytics with enhanced visualization and data discovery capabilities. RTC is an emerging trend that utilizes technology to effectively alert a company to possible non-compliance “triggers”. One approach is based on defining metrics, such as defining Key Risk Indicators (KRIIs) and Key Performance Indicators (KPIs) with corresponding thresholds to trigger as events-of-interest occur, allowing opportunities for timely root cause analysis and corrective action to take place before these events build to significant impact in scale or scope.

As firms look to develop their compliance capabilities, they must first establish a foundation of robust compliance testing data, technology, controls, and processes before they can progress to enhanced monitoring and surveillance capabilities (please see Figure 1). By enhancing surveillance capabilities, and leveraging emerging technologies to use structured and unstructured data, institutions are beginning to evaluate options to achieve RTC and shift the costs of compliance to investments which produce more proactive, accurate, and actionable outcomes.
2. Where are firms today?

In the current heightened regulatory environment, businesses are focused on how they conduct their Compliance monitoring to mitigate compliance risk and consumer harm. In the continuum of approaches across the industry, firms continue to solidify and evolve their infrastructure to meet regulatory demand and look for ways to improve monitoring of operational performance in a more focused manner.

Figure 1 – Testing, Monitoring & Surveillance progression across 1.0, 2.0 and 3.0 compliance capabilities.

“Banks are beginning to increase spending on innovative technologies for compliance functions...[they] are looking to utilize advances in technology and data analytics to be able to do things a bit differently than in the past... This could include things like utilizing machine learning technology to analyze documents and other compliance data more efficiently, or deep analytics to aid with trading compliance. As regulators are asking for more data quicker than ever before new technology investment becomes vital for banks to keep up.”

— Amy Matsuo, Principal and National Lead
KPMG Financial Services Regulatory Risk, American Banker, April 6, 2016
Wider availability of unstructured data is also enabling firms to “measure” employee conduct and organizational culture, its effects on overall performance and ability to identify risks much closer to the source than previously possible. The ability to monitor employee conduct or perform surveillance by leveraging data that is retained by firms today but not used for reputational or compliance risk reduction is an emerging trend. Organizations are beginning to look at evaluating communications, relationships, news, and operational data to find out-of-pattern behavior and preemptively detect and resolve potential issues before they result in negative impact to firms.

Additionally, advanced big data and analytics technologies make it possible to analyze compliance data across full data sets as opposed to traditional sample based approaches, offering much greater resolution and a panoramic view of potential compliance exposures.

As an example, in complex industries such as financial services, companies must consider regulatory requirements in the context of all of the many ways in which they interact with customers – anti-manipulative and disruptive practices, protection of sensitive customer data, call centers, social media, mobile applications, web applications, notifications and disclosures, print materials and branch operations.

The ability to perform machine document review such as Natural Language Processing (NLP) has significantly increased analytical depth for compliance purposes. One such example is covered fund analysis for the Volcker Rule, where thousands of documents and prospectuses were analyzed to determine whether a certain banking entity has ownership or sponsorship interests in any given fund. Notable benefits included significantly lowered costs of compliance and remarkably improved accuracy. Traditional human effort is unsustainable into the longer term, and quality of output does not scale with volume – mainly due to human error and fatigue. Additionally, the ability to scale is especially relevant when regulatory change events occur and when deep, rapid, and high quality analysis is needed for firms to conduct impact assessments.

RTC systems can be designed to improve overall compliance with the Federal laws and regulations (e.g., disclosures, prohibitions, documentation); these emerging technologies can potentially be leveraged across purposes to improve customer retention, enhance customer experience, streamline operations, and reduce operating costs.

For example, systems can now be designed to:

- Extract insights from compliance monitoring using multiple structured or unstructured data sources provide rich new content and leverage for multiple purposes (e.g. improving surveillance capabilities and for positive business impact).

- Proactively identify potential high-impact issues through enhanced surveillance capabilities, improving firm reaction time to potential misconduct or surveillance anomalies.

- Operate in a data driven environment to facilitate timely issue identification, root cause analysis and improved case management and workflow capabilities.

- Detect deviations from approved scripts by the call center agent and offer solutions to the agent during the call itself (by means of a real-time system alert).

- Detect prohibited language by a call center agent and flag the call for action by the relevant enterprise group, which may result in a secondary contact with the consumer to address the issue and/or additional training requirements for call center agents.

- Prompt possible resolutions to problems identified by a consumer to alleviate consumer dissatisfaction or the potential for a formal complaint.

- Leverage artificial intelligence and unsupervised learning models to link operations with surveillance to produce forward looking predictive capabilities and identify potential areas of focus for risk mitigation, which may be otherwise undetectable.

- Track inquiries related to features of new products or services or in response to promotional materials.
3. Scale and scope

Using the example of financial services, a goal of the RTC is to link a consumer's account(s) to each of the ways, or channels, in which the customer interacts with the company so that the consumer receives the access requested, the disclosures required, and assistance if needed, while the company is able to centralize compliance, including data capture, testing, monitoring, and surveillance. Ideally, CMS will embed compliance requirements within each of these channels and have the capabilities to identify, alert, and escalate any compliance issues.

The RTC should also consider indirect channels that consumers use to register their experiences with companies. These indirect channels include complaints databases maintained by regulators as well as postings on social media and other public Web sites. The RTC can incorporate monitoring these channels, for example using key words, to detect emerging issues such as consumer preferences, concerns, or product trends or even certain operating deficiencies. The company can use this information to implement action plans to address market trends or correct items before they become potential problems.

4. Considerations for transformation

Embracing RTC is not about setting up a regulatory database and “checking for compliance” in a silo. It is about applying a smart logic to map the regulatory requirements to the actual transaction and to begin leveraging emerging technologies to detect what may otherwise not be visible, and to accomplish compliance goals with higher accuracy and at lowered costs. RTC is applicable at all points throughout the life cycle of a product and firms should consider the following aspects, as they plan these transformational changes:

- **Enterprise wide approach:** RTC is most effective if implemented enterprise wide. By breaking it down differently for different products or regulatory requirements, the institution loses out on the power of complete and uniform data attributes.

- **Analysis versus Data:** Before jumping on a data bandwagon, consideration should be given to how data derived from RTC can be converted into analyses that enhance product features in a way that helps ensure regulatory compliance, promotes customer experience and identifies cost minimization and revenue generation opportunities.

- **Models and Analytics capabilities:** Firms should fine tune insights produced in areas that have historically proven to be of concern, such as fines, investigations, complaints or other disciplinary action.

- **Identification and Collection:** Data needed for enhanced testing, monitoring, and surveillance capabilities focusing on key entities that produce operational or regulatory exposure, including the client or consumer and key personnel involved in servicing any given client.

- **Technology Solutions:** Financial institutions use and maintain myriad systems for many purposes. RTC is effective only if the technology solution to be overlaid is compatible with all the systems in use or can be customized to suit RTC needs.

- **Sustainability:** The RTC should become an inherent and embedded element of the business process, independent of systems changes, people or geographies. Over a period of time the RTC will become “business as usual” and the institution will see differing levels of CMS maturity triggered by its use.

Regardless of industry, the key to unlocking proactive insights lies in the ability to gain consistent and timely access to highly varied data sets (structured and unstructured), deploying targeted analytical models aligned to regulatory requirements and to extract meaningful business insights as a deliberately intended consequence.
“With continued regulatory pressure and the emergence of technologies such as cognitive automation, machine document review, and predictive analytics, firms are beginning to consider ways to leverage these new technologies to not only meet compliance needs but to also proactively address operational issues and drive revenue and profitability. Compliance officers are beginning to view compliance spend not just as a cost but as an investment to improve business performance and customer experience.”

– Ahson Pai, Principal, Financial Services Regulatory Risk
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