21st century compliance: Technology’s role in reducing costs and creating value

The Dbriefs Banking & Securities series

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Agenda

• Introduction

• Industry perspective on compliance

• Modernizing compliance through technology enablement

• Considerations and benefits of modernizing compliance through Robotic Process Automation and Cognitive Intelligence (RPA & CI)

• Next steps
Industry Perspectives On Compliance
Compliance functions face organizational challenges and external pressures, but they also have new opportunities to be more efficient.

- Executive leadership buy-in and support
- First line engagement
- Ineffectively leveraging IT
- Resource challenges

Internal challenges:
- Robotic process automation (RPA)
- Cognitive intelligence (CI)
- Risk sensing
- Big data / Enterprise data analytics

Emerging technologies:
- Continued additions and changes to regulatory/legal requirements
- Increased depth and frequency of regulatory examinations
- Increased regulatory expectations across all lines of defense

Regulatory pressures:
- Rationalization of first and second line responsibilities
- Reliance models
- Proactive oversight and execution
- Enhanced talent expectations and “doing more with less”

Evolving industry practice:

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Given the current internal and external pressures facing a compliance risk management program, the opportunity exists to take a strategic review of an organization’s compliance program.

**Moving from...**

- A reactive response “cost center”
- Inefficient implementation and execution
- Lack of a holistic view of risk
- Underinvestment in technology and infrastructure

**Toward...**

- A predictor of compliance risk and provider of opportunities for cost savings
- Integrating compliance activities into business process & decisions
- More complete usage of technology, data, and analytics capabilities
- Technology and talent solutions to enable efficiency and effectiveness
Polling question #1

What do you think is the greatest challenge facing compliance risk management functions in the financial services industry today?

• Emerging technologies
• Regulatory pressures
• Internal challenges
• Evolving industry practices
• All of the above
• Don’t know/Not applicable
An end-to-end compliance risk management framework sets a standard way to design, assess, implement, and continuously improve an organization’s compliance function.
Automation and enhancements should be considered within a broader ecosystem of people, process, technology and analytics for levers that will enable compliance to move toward a more efficient target state.
People levers are focused on delivery model and competencies, while process levers are focused on optimization and re-design.

**Key activities**

- Rationalize use of **third-party providers** or engage **managed services**
- Consider or enhance offshore **capabilities** and staffing, and systematic re-allocation of certain compliance activities
- Locate sufficient specialists to provide subject matter expertise on high-risk or high complexity activities
- Use of standardized and role based **training**, and rotation programs to cross-train

**People**
- Third party support & managed services
- Offshore support
- Subject matter specialists
- Rotational programs

**Process**
- Robust issue tracking
- Regulatory interaction & exam prep
- Enhanced reg change process
- Governance

**Key activities**

- **Enhanced Regulatory Change Process** supported by a scalable GRC tool
- Increase **preparedness for examinations**
- **Streamline governance processes**, including senior management, compliance and the lines of business
- **Rationalization** of first and second compliance oversight activities
- **Robust case management** and clearly defined escalation path for issues
Analytics levers are focused moving toward proactivity and prediction, with technology levers focused on driving efficiency through automation.

Key activities

- **Enhance and utilize analytics** to better prioritize areas of risk for testing/monitoring.
- **Deploy threshold monitoring and escalation** with formalized, clear escalation pathways.
- Improve the “enterprise-wide view” of compliance activities to remain agile in a complex environment.
- Utilize **trend identification and analysis** to predict and create actionable insights.

Key activities

- Take advantage of **RPA & CI capabilities**
- Establish governance programs and/or center of excellence to effectively **manage data security** and related protocols.
- Use of a **regulatory change tool** that includes laws rules and regulations (LRR)/Process/Control mapping.
- **Integrate and leverage systems** to facilitate workflow management, issue escalation, root cause management and reporting.
Polling question #2

Which key enabler do you think can provide for the largest gains in efficiency and effectiveness?

• People
• Process
• Technology
• Analytics
• None of the above
• Don’t know/Not applicable
Modernizing Compliance Through Technology Enablement
We are on the cusp of “Business 4.0”
Digitization of white collar jobs via RPA & CI, and advances in data science have sparked the Business 4.0 revolution

Business 4.0
• This revolution redefines what it means to be a professional
• RPA will have commenced deployment in most large businesses by 2017
• RPA and CI automation will be ubiquitous in business by 2020
• Horizontal machine learning platforms (MLPs) become ubiquitous by 2025

Increasing automation: 2nd most important strategic priority

Interest in automation is increasing at a rapid rate

1 http://www.transparencymarketresearch.com/pressrelease/it-robotic-automation-market.htm
2 http://www.idc.com/getdoc.jsp?containerId=prUS41072216
Overview of emerging technologies

The RPA and CI spectrum ranges from enabling technologies that improve parts of the business, risk or compliance process to sophisticated technologies with cognitive elements.

<table>
<thead>
<tr>
<th>Area</th>
<th>Technologies</th>
<th>Description</th>
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<tbody>
<tr>
<td>Foundation</td>
<td>Data integration</td>
<td>Integrated data to provide a consistent information foundation <em>(e.g. Compliance Risk and Regulatory Data Warehouse)</em></td>
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<td>Predictive analytics</td>
<td>Software solutions using predictive models <em>(e.g. Compliance Risk Models)</em></td>
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<td>Data visualization</td>
<td>Software placing data in a visual context <em>(e.g. GRC Dashboards)</em></td>
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<td>Automation</td>
<td>Robotic Process Automation (RPA)</td>
<td>Rules-based systems that mimic human behavior to automate parts of repeatable processes <em>(e.g. Compliance Testing and Sampling)</em></td>
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<td>Cognitive intelligence</td>
<td>Natural Language Generation (NLG)</td>
<td>Applications that accept structured data inputs (Excel-like rows/columns), to generate seemingly unstructured narratives <em>(e.g. Compliance Reporting, AML SAR reports)</em></td>
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<td>Natural Language Processing (NLP)</td>
<td>Applications that process unstructured data (e.g. text) and allow querying and generation of structured data <em>(e.g. Regulatory Change/P&amp;P Documentation Review)</em></td>
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<td>Machine Learning (ML)</td>
<td>Applications that are able to improve predictability and operation based on data they receive over time. <em>(e.g. Fraud Analysis Applications)</em></td>
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<td>Augmented Intelligence (AI)</td>
<td>Applications able to mimic human behavior, such as visual perception, speech recognition, decision-making, and translation between languages <em>(e.g. Risk Identification for Compliance Risk Assessments)</em></td>
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*What’s changed: convergence of 20+ years of AI research, improvements in big data, increased computing power*
Polling question #3

What are the key technology enabler(s) that your organization is considering?

• Advanced analytics
• Robotics/automation
• Cognitive intelligence
• Augmented intelligence
• All of the above
• Don’t know/Not applicable
Considerations and benefits of modernizing compliance through RPA&CI
Opportunity for technology and analytics enablement lies within the execution focused parts of the compliance risk management framework.

### Compliance risk management framework

<table>
<thead>
<tr>
<th>Tech categories</th>
<th>Governance</th>
<th>Policies &amp; procedures &amp; reporting</th>
<th>Risk assessment (RA) &amp; regulatory change</th>
<th>Monitoring &amp; testing</th>
<th>Data, measurement &amp; reporting</th>
<th>Escalation, investigation, resolution, &amp; validation</th>
<th>Regulatory interaction &amp; coordination</th>
<th>Communication, awareness &amp; training</th>
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<td>Cognitive intelligence</td>
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**Highest impact categories**

- No/minor impact
- Medium impact
- High impact

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## Deeper dive into illustrative compliance use cases

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<tr>
<th>Use case area</th>
<th>Use case name</th>
<th>Current process</th>
<th>Process impact</th>
<th>Applicable technology</th>
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</table>
| RA & regulatory change | RA results | Regulatory, risk and control data are typically not systematically aligned and require manual intervention to determine areas of risk to the organization | • Source emerging risks and changes from the regulatory change management process as an input to the RA  
• Deploy text analytics within the risk assessment data to identify key themes. Identify risk concentrations within specific products, functions or geographies. Analyze trends in language sentiment to identify if the risks are increasing or decreasing from previous assessment results | Cognitive intelligence (Cognitive/AI) |
| Monitoring & testing | Testing automation | Monitoring and testing is largely performed manually, resulting in substantial hours and capacity issues | • Utilize RPA to automate the collection of data from multiple systems (assumes strict criteria)  
• Use the robot to “replicate the process” and execute rules based test steps. The robot determines test results as “pass” or “fail.” | Automation (RPA) |
| Data measurement & reporting | Reporting dashboards | Reporting is typically labor intensive and point in time. Data is only refreshed when reports are created and is not found in a single location to enable near continuous reporting | • Develop dashboards that easily display the analysis of concentrations, risk appetite breaches, and other key risk and performance indicators (KRIs/KPIs)  
• Automate the calculation of metrics within the dashboard on a real-time basis  
• Establish alerts for when metrics pass various thresholds (both early warnings and limit breaches) | Analytics & automation |
| Data measurement & reporting | Complaints analysis | Complaints are typically triaged manually and responded to without utilizing advanced analytic and intelligence activities to identify areas of concern or systemic trends | • Capture real-time feedback and reporting of complaint-related information by enabling employees/customers with mobile technology to quickly capture relevant information  
• Discern sentiment based on contextual cues  
• Leverage handwriting, voice, and image recognition to ingest and process data  
• Report consolidated findings and results | Cognitive intelligence (NLP) |
Committing to a transformation/modernization journey can accelerate a compliance functions realization of efficiency and effectiveness

Outcomes of Modernization

**Transformative change**: re-engineer core processes and automate the function to be more proactive and predictive; modern enterprises need top-of-the-house strategies and reliance models

**Flexibility**: rapidly scale up or down depending on the nature of the compliance and/or business issue

**Increase to capacity**: re engineer traditional resource model and allocation methods and use deployment of technology, analytics, managed services and offshore to ensure proper balance of resources

**New competencies**: compliance professionals are elevated to true business partners and advisors

**Potential cost reduction**: cost reduction opportunities exist by creating efficiencies and seeking ways to be more effective with increased capacity across the organization through better use of technology and resource allocation

**Enterprise-wide view of risk and compliance**: from predicting to sensing to acting and monitoring, the lines between these formerly separate realms are disappearing quickly
Polling question #4

What are the types of compliance risk management activities that you would consider for automation?

• Reporting on the compliance risk management plan
• Aggregating compliance risk management risk assessment results
• Compliance risk management testing and sampling methods
• Escalation of compliance risk management issues
• All of the above
• Don’t know/Not applicable
Next steps
Develop a Business Case
- Documentation of quantifiable benefits (quality, FTE time/cost savings, etc.) that can be achieved by modernizing and/or technology
- Enables development of financial model that allows leadership to make investments, roadmap, etc. decisions

Develop Priority Use-Cases in Workshop lab
- Facilitated environment that allows decision makers to explore the benefits of modernization and technology
- Develop a clear modernization plan with robust and practical ideas for applying RPA&CI to enable increased efficiency and effectiveness

Execute a Proof of Concept
- Demonstration of the concept of RPA&CI, where a prototype robot ("bot") is created for a pre-selected process or activity
- Illustrates the benefits that can be derived through bot implementation and provides critical inputs for broader implementation of RPA&CI in the future

Many organizations are applying a structured approach to understand the potential for and related benefits of modernization including the deployment of RPA & CI technologies
Question and answer
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Acronyms used in presentation

- **AI** - Augmented Intelligence
- **AML** – Anti-Money Laundering
- **BPM** – Business Process Management
- **CI** - Cognitive Intelligence
- **GBS** - Global Business Services
- **GRC** – Governance, Risk and Compliance
- **IT** – Information Technology
- **KPI** – Key Performance Indicator
- **KRI** - Key Risk Indicator
- **LRR** – Laws, Rules and Regulations
- **ML** - Machine Learning
- **MLP** - Horizontal machine learning platform
- **NLG** - Natural Language Generation
- **NLP** - Natural Language Processing
- **P&P** – Policies and Procedures
- **RPA** - Robotics Process Automation
- **SAR** – Suspicious Activity Report
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