

The Complete Compliance and Ethics Manual 2024

Artificial Intelligence and Corporate Compliance

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Artificial intelligence (AI) is technology that gives machines the power to perform specific tasks that normally require human intelligence, such as visual perception, speech recognition, decision-making, learning, and language translation. AI, and its definition, continues to evolve. Part of AI's development is contingent upon its creator's interpretation and expectation of human intelligence as well as imagination of nonhuman intelligence. As a result, stages, classifications, or levels of defining AI have started to formulate.

AI continues to be featured in the news, conversations, and product development. Like other innovative technologies that individuals choose to simply ignore, due to the lack of understanding, fear, or disbelief, one thing continues to stay constant: It is not going away.

In an era of ever-evolving regulations, heightened scrutiny, and increasing data complexities, businesses are under constant pressure to maintain compliance with a multitude of laws and regulations. Compliance failures can result in costly penalties, reputation damage, and legal repercussions. In response to these challenges, many corporations are turning to AI to streamline and enhance their compliance efforts.

When starting to discuss AI and corporate compliance, there are two aspects to consider. One is understanding how AI will improve corporate compliance in efficiently identifying, monitoring, and addressing compliance issues. The other is how corporate compliance will now need to identify risks, develop guidelines, and monitor the use and implementation of AI.

In this section, we will help (1) introduce and define AI, (2) identify the role of AI in corporate compliance, (3) discuss key benefits to corporate compliance, and (4) explore what to consider in embracing and thinking about keeping AI in compliance.

What Is AI?

AI encompasses a variety of technologies with the goal of imitating a human thought process and rational. The term "artificial intelligence" was coined in the late 1950s but has become more popular due to the advancement of the data storage, algorithms, and heavy investment in consumer goods. Early AI explored topics like problem solving. In the 1960s, the U.S. Department of Defense began training computers to mimic basic human reasoning. In the 1970s, the Defense Advanced Research Projects Agency (DARPA) applied the early technology to street-mapping projects. DARPA produced intelligent personal assistants in 2003, long before Siri, Alexa, or Cortana were household names.

This work paved the way for the automation and formal reasoning that we see in the technology today, including decision-making and smart search systems that can be developed to complement and augment human abilities. The creative minds in Hollywood sell action and drama related to artificial intelligence, but we are far from the AI negatively depicted. AI has evolved to provide many benefits in various industries such as healthcare, transportation, defense, financial, manufacturing, retail, and more.

The internet of things (IoT), which is the network of computing devices connecting everyday objects via the

internet, enables the sending and receiving of data, and the proliferation of smartphone technology allows the collection of large volumes of valuable information. However, searching, analyzing, and understanding that data for our benefit can take a lot of time and effort. Another challenge is that we can only absorb a finite amount of information, where AI can digest and process large amounts of data in a fraction of the time it would take us. AI brings human-level intelligence and structure to electronic data. Extracting meaningful insights is the next obvious technological evolution, so we can focus on what to do with that data.

The most simplistic way to look at AI is as a newborn child; only in the technology world, the experiential knowledge equivalent is data. A child needs to learn various basic skills before it can have an educated conversation. This child needs patience and the guidance of a teacher. Similarly, the professional or expert must also work hand in hand with AI, so it may learn how to properly function. Unlike the child, computers were not created with a cognitive ability to distinguish visual objects, sound, speech, smell, or touch.

However, various technologies are developing similar attributes to mimic human senses. AI will be the combination of these and similar technologies. Below are a variety of key definitions that include:

- **Machine learning** automates analytical model building. It uses methods from neural networks, statistics, operations research, and physics to find hidden insights in data without explicitly being programmed for where to look or what to conclude.
- **Rule-based machine learning (RBML)** is a term in computer science intended to encompass any machine learning method that identifies, learns, or evolves “rules” to store, manipulate, or apply. For example, a rule-based approach might say, “If there is a transaction that is more than \$1,000,000, activate a fraud review.” The people who wrote the program would have built that rule into the program.
- **A neural network** is a type of machine learning, made up of interconnected units (like neurons) that processes information by responding to external inputs and relaying information between each unit. The process requires multiple passes at the data to find connections and derive meaning from undefined data.
- **Deep learning** uses huge neural networks with many layers of processing units, taking advantage of advances in computing power and improved training techniques to learn complex patterns in large amounts of data. Common applications include image and speech recognition.
- **Cognitive computing** is a subfield of AI that strives for a natural, human-like interaction with machines. Using AI and cognitive computing, the goal is for a machine to simulate human processes through the ability to interpret images and speech—and then speak coherently in response.
- **Computer vision** relies on pattern recognition and deep learning to recognize what’s in a picture or video. When machines can process, analyze, and understand images, they can capture images or videos in real time and interpret their surroundings.
- **Natural language processing (NLP)** is the ability of computers to analyze, understand, and generate human language, including speech. The next stage of NLP is natural language interaction, which allows humans to communicate with computers using normal, everyday language to perform tasks.
- **A chatbot** is a computer program that uses NLP and AI to simulate human conversation and derive a response. Essentially, it’s a machine that can chat or respond to chatter.
- **Graphical processing units** are key to AI, because they provide the heavy computing power that’s required for iterative processing. Training neural networks requires big data plus computer power.

- **The Internet of Things** generates massive amounts of data from connected devices, such as Google Home, Ring cameras, and Alexa, although the data are mostly unanalyzed. Automating models with AI will allow us to use more of it.
- **Advanced algorithms** are being developed and combined in new ways to analyze more data faster and at multiple levels. This intelligent processing is key to identifying and predicting rare events, understanding complex systems, and optimizing unique scenarios.
- **Application processing interfaces (APIs)** are portable packages of code that make it possible to add AI functionality to existing products and software packages. They can add image recognition capabilities to home security systems and Q&A capabilities that describe data, create captions and headlines, or call out interesting patterns and insights in data.

Like a decision tree, data rules are some of the basic instructions of how to interpret or validate data. However, these rules or algorithms lack the cognitive features to interpret the gray areas. Therefore, machine learning or rule-based machine learning must be incorporated to continue to help it interpret, without being explicitly told what to do. Like the human brain, the neural network is the connection path that helps it draw data to create certain assumptions or conclusions. Deep learning is having multilayered neural networks. Computer vision relies on pattern recognition and deep learning to recognize what's in a picture or video. We see this in face-recognition technology. NLP technology provides the ability to analyze, understand, and generate human language, including speech. Therefore, it is the combination of all these technologies, including cognitive computing, that endows AI with the capacity to have a human-like conversation with a user.

Stages of AI

As AI continues to evolve, so does the way we view it. The example of a newborn child was given to explain the development of AI and, thus following that same methodology, we will discuss the overall stages.

- Stage 1: Reactive

In this stage, the AI is following a set of rules, such as when IBM's Deep Blue beat Chess Grandmaster Garry Kasparov. Or looking at it more simplistically, when using an excel VLOOKUP function formula, such as if Column A1 has a specific number in a VLOOKUP table, return the number in Column B1, if not return 0. This is a simple reaction, such as if a child's favorite toy is abruptly removed by a stranger. The child's reaction would likely be to cry.

- Stage 2: Limited memory

In this stage, the AI is capable of learning from historical data in making decisions in addition to the reaction or rule-based protocols. The child again has their favorite toy and now sees the same stranger. The child has learned that there is a risk of losing the toy. The child may clutch the toy tighter or decide to cry before it is taken.

- Stage 3: Theory of mind

In this stage, which is not as developed or under consideration in comparison to the first two stages, it would focus on the emotional, rational, and exploring its known and unknown needs. This would be best comparable to a young child comprehending the existence of options, their place in society, and the benefits and consequences of one's actions. This is like Ivan Pavlov's work involving temperament, conditioning, and involuntary reflex action but without the human emotional component. However, there is work on developing Artificial Emotional Intelligence, which involves facial recognition, that would

greatly contribute to this stage.

- **Stage 4: Self-aware**

In this stage, although hypothetical, the AI becomes aware of its own existence and can independently make decisions based on its own method of rationalization. Depending on if the AI is only able to do this for a specific task or objective, it may be labelled as Artificial Narrow Intelligence (ANI). If the AI can learn additional topics, where it would be comparable to a human capability, it would be referred to as Artificial General Intelligence (AGI). The last is the Artificial Superintelligence (ASI), which would be more capable than a human. This is also referred to as Singularity.

The Role of AI in Corporate Compliance

AI technologies, such as machine learning and natural language processing, have emerged as powerful tools to help corporations address the complexities of compliance. Here are several ways in which AI is making a significant impact on corporate compliance:

- **Regulatory Monitoring and Alerts:** AI-powered systems can continuously monitor regulatory changes and alerts, ensuring that businesses stay updated on the latest legal requirements. By analyzing vast datasets, AI can quickly identify relevant changes and their potential impact on the organization, enabling a timely response to ensure compliance.
- **Data Analysis and Risk Assessment:** AI can analyze large datasets to identify trends and patterns related to potential compliance issues. By leveraging historical data, AI can help companies assess their level of compliance risk and take proactive steps to mitigate it.
- **Contract Management:** AI-powered contract management tools can analyze and extract key information from contracts, enabling organizations to monitor and enforce compliance with contractual agreements. This not only saves time but also reduces the risk of inadvertent breaches.
- **Employee Training and Monitoring:** AI-driven platforms can provide personalized compliance training to employees based on their roles and the specific regulations that apply to their tasks. Furthermore, AI can monitor employee behavior and raise red flags when suspicious activities or compliance breaches occur.
- **Predictive Analytics:** AI can use predictive analytics to forecast potential compliance issues, allowing companies to take preemptive actions to prevent violations before they happen. This can significantly reduce the risk of penalties and legal disputes.

AI and Corporate Compliance

Most of the information regarding AI is focused on identifying how it will help multiple industries. Some of the benefits of AI-enhanced compliance include:

- **Improved Efficiency:** AI automates many time-consuming compliance tasks, freeing up human resources to focus on more strategic activities.
- **Timely Detection:** AI can identify potential compliance issues in real-time or even before they occur, allowing for prompt corrective action.
- **Enhanced Accuracy:** Machine learning algorithms reduce the risk of human error in compliance-related tasks.

- **Cost Savings:** By reducing the risk of non-compliance and associated penalties, AI can result in substantial cost savings for businesses.
- **Scalability:** AI systems can handle large volumes of data and adapt to changing compliance requirements, making them ideal for businesses of all sizes.

Below are a few elements of the compliance program that may look to leverage AI in data collection, analysis, and monitoring.

Policies, Procedures, and Code of Conduct

Policies and procedures that frequently change due to laws or internal improvements are a challenge to maintain and update. However, if AI is incorporated in some of those procedures, such as ensuring all purchase orders have an authorized signature on the invoice, it would be easier to update additional factors to review, as the invoice is already scanned in with the purchase order. Additionally, past occurrences that did not fall in line with new changes may be easier to identify and analyze. This type of application is a business control that is a necessary part of a complete compliance program: making sure that a policy is actually executed in practice (see “Auditing and Monitoring” later in this article).

Human resources departments are typically involved in addressing various legal or policy issues, such as sexual harassment, pay equity, benefits administration, or abuse, and the consequences of an employee leaving an organization. Most of the time, this is typically brought to human resource’s attention after the fact. AI technology can be used to monitor company communications to proactively identify inappropriate interactions, the sharing of confidential information to noncompany personnel, web activity, and the risks of employees looking to leave the organization. This would initially increase the amount of data received but would identify potential violations faster and uncover those that would otherwise go undetected.

Oversight and Accountability

AI cannot be accountable for the compliance function, but the human beings responsible for compliance can identify specific metrics or tasks for which they are responsible, and then use AI to monitor and help demonstrate the effectiveness of the compliance program. Depending on the risk and priority of the organization, a compliance dashboard can be maintained by the compliance professional. Once defined by the organization, AI can proactively gather and process information for the compliance professional to ensure that the company is in line with its compliance program.

Education, Communication, and Awareness

Assessing education and training results can be a challenging task. Understanding that an individual has completed the training—and being able to analyze which questions were answered incorrectly—can be very valuable. Taking this historical data in conjunction with other employment or communication data can provide insight into possible higher risks of policy and procedure violations or indicate where further training is needed. Also, as AI grows within the education industry, it will be able to leverage a more comprehensive educational program where AI is the teacher. This can increase productivity and reduce costs, rather than just relying on employees taking online self-study courses.

AI can take a front seat in performing necessary corporate due diligence tasks that may arise in a variety of settings. It can assist in vetting potential employees, including reviewing background information, academic history, social media, and cross-referencing various employment sources to ensure the validity of the candidate. Because AI has access to vendor and customer files, it may also discover potential conflicts of interest or another

compliance risk.

Enforcement, Discipline, and Incentives

Understanding and analyzing historical or industry data regarding enforcement, discipline, and incentives can provide real-time understanding as to the frequency or type of issues occurring.

Depending on the size of the organization, there can be a plethora of whistleblower allegations. There are various steps that should be taken when a whistleblower raises a concern. One is to ensure that sufficient and timely efforts have been performed by the organization to investigate the merit of the allegation. Many third-party whistleblower reporting systems may require a person to review and determine if there is enough evidence to open an investigation. AI can possibly help analyze this information and cross-reference past reports to determine if there is a pattern. At the simplest level, it can also start a timer from the date of the report to track the timeliness (or lack thereof) of the investigation.

Additionally, AI can help with data mining and analytics during the investigation. Forensic accountants can use AI to cover a larger amount of data in a shorter amount time and at a fraction of the cost. AI would be able to:

- Automate the process of preparing data for analysis
- Be used by nontechnical professionals
- Provide immediate results
- Analyze **all** transactions
- Find intentional, unintentional, and unanticipated anomalies

Auditing and Monitoring

Management of compliance records is both essential and expensive work. This may include contracts, third-party intermediaries, travel and entertainment, data privacy and security, and conflicts of interest to identify fraud or other noncompliance. Compliance professionals spend thousands of hours poring over countless pages of documents, such as regulatory filings, internal audit reports, compliance program processes, and other records, to determine whether they comply with laws, terms, and conditions.

AI will be able to provide more monitoring and better auditing results. Traditionally, the auditor needs to take a sample size of the population to check if certain transactions (purchase orders, contracts, time, expense transactions, etc.) are in line with the organization's policies and procedures. Larger organizations may have software programs that review the entire population and identify anomalies; however, this is still at the control and discretion of the auditor.

AI will be able to perform these tasks faster, more accurately, and with consideration of other scenarios or circumstances that the auditor may miss. Also, the organization's auditor may change, but AI would remain, continue to learn, and maintain the knowledge and methodology of an effective and consistent review. Because AI may have access to all data, it can use this audit methodology to analyze and expand the review of other data. Current or future auditors can focus on the overall process and review the necessary items while helping the AI to refine the ongoing methodology.

There are a variety of monitoring activities AI can do on a recurring basis to identify:

- Money laundering
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- Terrorist activity
- Politically exposed persons
- Criminal activity
- Global sanctions

AI can also comb the web, identify patterns, and strengthen and streamline the Know Your Customer process. Algorithmic machine learning models with a layer of human-like cognitive reasoning can raise red flags, which is an increasingly important capability with the broad spectrum of technologies in play. Automatically generated monitoring reports may exist, but the user still has to review them and come to a conclusion. AI can help perform these tasks.

Preparing to Embrace AI

Future issues on developing, using, and relying on AI will involve various risks, including ownership and accountability. If AI finds personal information being used or divulged in violation of the General Data Protection Regulation (GDPR), who will be accountable for that development or error? Although new laws and governance measures will emerge, failing to keep track of updates to current laws such as patents and copyrights may also cause problems. Carefully thinking about these potential issues and upcoming regulations will also dictate how a compliance professional looks to keep AI technology in compliance.

There are technical audits to identify risks to technology platforms by reviewing not only the policies and procedures, but also the network and system configurations, including who has access to—or should be excluded from—a system. These types of audits will need to be incorporated into AI development and testing, ultimately ensuring the goals of AI are aligned with protocols and conform with management's intended use. Starting to benchmark the use of technology from a compliance perspective may be a good start. Compliance professionals using AI should make sure compliance controls regarding AI are in place.

AI promises to solve various problems, reduce time and cost, as well as make the business and related tasks more efficient. However, we are in uncharted territory. Compliance professionals should be included in the development conversations. The goal is to work hand in hand with developers to begin to understand the various implications and begin to outline compliance considerations. Because AI needs to learn how to be ethical, one may argue that a compliance professional should be involved in that part of its development.

Next is a list of questions to consider while thinking about implementing AI as part of the organization.

- Who will be part of the core AI team? It may include engineers, programmers, management, compliance professionals, third-party software developers, and external counsel or consultants.
- How will AI be developed? This must be clear in regard to the long-term and immediate purposes. Those creating it must understand the implication of their work. Some considerations may include using open sources versus third-party software.
- How will AI learn to be ethical? Because AI learns from the input it's given, the modelers who build it need to be trained on ethics. They need to take into consideration items such as not disregarding sensitive data fields. Also, those same modelers need to scrutinize if inadvertent biases are derived from the inputs in the creation of the machine learning model.
- How would development be tracked? Recording the facts, testing results, and creating supporting

documentation are essential to ensuring a proper and transparent audit trail is available. A third-party verification or audit may also be considered.

- Who is accountable? Identifying the individuals accountable for the success or failure of AI is important. They would have to have the ability to make or support related ethical or compliance decisions when they arise.
- What governance or policies will be followed? These policies and procedures most likely will be developed in conjunction with the AI model development, deployment, and monitoring; but they all should be formed around a single source of data.
- Who will ensure that those policies align with emerging laws? Compliance professionals must keep an eye out for new developments in laws that may support or hinder AI development.
- How will issues such as cybersecurity be addressed? This may have to be handled on a case-by-case basis; nonetheless, documentation will be needed.

In the end, AI will work with the data on which it has trained. It can find patterns, but the model itself is not necessarily inquisitive. AI is still inhibited by the algorithm, data posed in the problem, and the fact that the data will be unique to that organization. It is not until AI can access data outside of the organization that it can continue to learn. AI is still in the developmental stages, but beginning to learn and becoming familiar with AI, including the terminology, will help ease the intimidation of working with it.

While there are challenges to overcome, the benefits of AI-enhanced compliance are undeniable. In a world where regulatory compliance is not just a box to check but a vital component of business success, embracing AI is a strategic move that can help corporations stay compliant, reduce risks, and thrive in the modern regulatory environment.

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