The global level of spending on anti-money laundering programs and compliance obligations is anticipated to exceed $8 billion this year. Hiring additional AML staff can no longer mask the industry’s overall lack of sophisticated automated analytical and data management tools. Relying on time-consuming and onerous manual processes for research, analysis, and communicating and collecting data is a major problem.
Financial institutions continue to ratchet up their already stunning level of spending on anti-money laundering (AML) programs and compliance obligations, with the global level of such expenditure anticipated to exceed $8 billion this year. In the ongoing struggle to satisfy increasing regulatory expectations, avoid regulatory fines, preserve reasonable cost controls, promote operational efficiency, and prevent reputational harm, it’s safe to say that the financial services industry has reached a critical tipping point. Hiring additional AML staff – however expert, well trained, and motivated they may be – can no longer mask the industry’s overall lack of sophisticated automated analytical and data management tools. Human judgment will always play an important role, but relying on time-consuming and onerous manual processes for research, analysis, and communicating and collecting data is a major problem.

A prime example of the need for AML technological innovation is fulfillment of the mandates related to the new FinCEN rule governing beneficial ownership (with similar requirements arising globally). Determining beneficial ownership requires looking through multiple, complex layers of ownership, control, and investment to understand key hierarchies, associations, and relationships. No easy task, as ownership may well occur on an indirect basis hidden within a labyrinthine organizational chain. Beneficial ownership data must also be assessed globally, and firms must keep pace with an enormous number of changes, including transfers of ownership interests between jurisdictions.

Using manual methods to satisfy beneficial ownership requirements, such as having scores of humans Google names and institutions, or relying on Internet pages or incomplete registries, is simply not feasible. Particularly for large, global companies, the analysis required to detect connections breaks down as the relevant structured and unstructured data from worldwide public and non-public sources grow in volume and intricacy.

Two AML innovations stand out as increasingly indispensable in solving the beneficial ownership puzzle with speed and accuracy. The first is graph analytics, a powerful method of exploring relationships between individuals, entities, and myriad other data points, which is behind prompts such as, “Do you know this person?” and “Would you like to connect?” It thrives on high levels of complication and interconnectedness, and on discerning patterns that human study cannot readily detect, particularly ones that are circular, not linear (e.g., the ability to perceive links and apply logic using multiple starting points rather than a simple step-by-step progression).

Graph analytics already is used in a number of arenas, such as identifying weaknesses in power and water grids and transportation networks and optimizing airline routes. Given the current advances in available computing power, it is possible to conduct analytics at web-scale, further expanding the possibilities of understanding the ecosystem of risk actors.

One clear benefit of graph analytics is its mapping capability, which allows an organization to represent its links in graphs, simplifying the process of understanding the relationships among affiliates and related entities. Storing an organizational structure in a graph database allows for deeper quantitative analytics that answer the question, “Are these two (or more) different people or entities interconnected for purposes of determining ownership or control?” This is especially valuable in situations where data is limited, such as offshore jurisdictions with restricted disclosure, recordkeeping requirements, and registries. Graph analytics can also be used to determine relationships among AML documents – such as share certificates, trust declarations, and registries – allowing organizations to flag anomalies with low levels of false positives.
Another key AML innovation is computer vision, which uses neural networks that mimic the processing architecture of the brain to help computers gain a high-level understanding from digital images. If we consider natural language processing akin to teaching a computer to read, then computer vision is akin to teaching a computer to see.

The extension of this capability to AML can be profound in, for example, the data enrichment needed to extract key attributes about a legal entity client. Data enrichment, which typically leverages numerous internal and external systems, can take hours for an analyst, with time wasted searching for the foundation documents because of differences in company and jurisdictional naming conventions. Computer vision allows the AML system to perform a rapid and customized search based on government and company seals and other official indices that are a defining visual feature of foundational documents. Moreover, this image-based strategy can be coupled with text-based methods – combining “hearing” and “seeing” – for maximum performance.

AML program demands have the potential to overwhelm a financial institution’s resources, operating costs, competitive status, and internal controls structure. Transformational advances such as computer vision and graph analytics are no longer a “nice to have.” Rather, particularly for labor-intensive and rules-based tasks, they must now be considered critical to supplementing manual efforts and making employees more productive. Effective use of automation is now the sole manner in which an institution can maintain an AML compliance program that is at industry standard and meets regulatory expectations.
About Genpact

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