

Symphony

AYASDI

Anti-Money Laundering: Next Generation Monitoring

WHITEPAPER

The Need to Rethink AML

Financial crime is exploding, and money laundering has grown by \$1 Trillion in 10 years. You've bought technology and put costly programs in place, but your institution is still being used. Transaction counts are ballooning, payment types and speed increase constantly and 95%+ of all investigations are dead ends. Your regulatory obligations are increasing and the rate of change renders existing processes and policies redundant almost immediately. It is clear that yesterday's AML approach fails to address today's AML needs.

You've added new rules to your transaction monitoring systems (TMS), you've introduced party and account level monitoring and you have tuned your TMS as often as you can. Your alert backlog is increasing, your investigators are fatiguing, and your risk escalates.

Buried under unmanageable volumes of false positives, unable to identify false negatives and striving to meet the budgetary cost cutting measures imposed on you, you do the only thing you can – attempt to tune your thresholds once again, only to recognize that you can no longer tune your way out of trouble. K-Means clustering, as a safe go-to, does not provide the accuracy or uplift you need. You have finally reached the conclusion that rules based monitoring systems do not work.

It's time to use a new approach.

What if you could apply bolt-ons to your existing systems, to get rapid, accurate and contextual insights that dramatically reduce false positives and false negatives and enable investigations of only the truly suspicious activity? What if you could identify changes in client and counter-party behavior as it was happening? What if previously unseen risky behaviors were brought to your attention immediately? What if, investigators were able to clearly identify alert reasons and determine suspicion instantly?

Introducing Ayasdi AML

Symphony AyasdiAI deploys the world's most powerful, advanced and sophisticated technology to supercharge your detection systems and processes. Built on a heavily patented platform delivering a new branch of mathematical science, Ayasdi AML gets more out of your existing data, to help you slash false positives, discover new anomalies, and control ballooning costs. Ayasdi AML creates a roadmap to next-generation monitoring-tracking customers' actual behavior, monitoring changes over time, and spotting emerging patterns that signal potential problems. We deliver every insight with a fully transparent audit trail, to set your mind at ease, and preserve your status with regulators. Step one is to do this on your existing TMS.

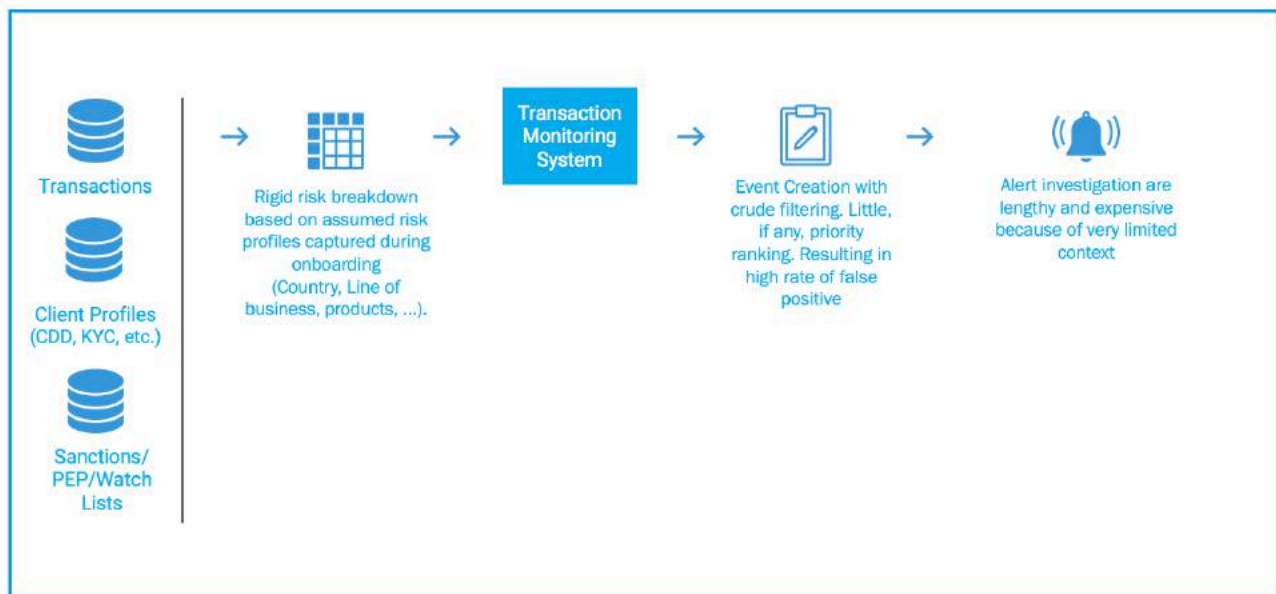
Ayasdi AML makes your alerts more accurate and false positives rare. It gives your investigators valuable context, so they can focus on what matters most: Genuinely suspicious behavior.

The Challenge: The Cost of Compliance

What makes AML such a difficult problem to solve is that it involves massive amounts of complex data, detailed workflows, and significant human involvement. The result is that the cost of compliance is increasing by as much as 50% annually, a drag on earnings for financial institutions.

Traditional AML solutions are overwhelmed by the sheer amount of incoming data. They fail to accurately identify truly suspicious behavior and lack the capabilities to address the dynamic nature of illegal activities. As a result, as much as 95% of an investigation team's effort is wasted.

A current AML transaction monitoring process generally looks like the following:



A typical rule-based AML process.

At the heart of the problem is finding the balance between signal and noise. Too much 'noise,' i.e., false positives, increases investigation costs. Too little 'signal,' i.e., false negatives; strong filtering of real suspicious activity, means a bank is exposed to regulators because they might fail to detect criminal activity.

Traditional AML methods have not scaled to contend with the current regulatory environment. Most AML processes typically have hand-coded rule patterns, known as typologies, to evaluate each transaction for each geography or type of business. Most AML triage programs use last-in-first-out (LIFO) or transaction amount to prioritize investigation. Such typologies are coarse at best, and non-existent at worst.

In contrast, Ayasdi AML ensures alerts are more accurate, contextual and insightful, vastly reducing false positive counts. It gives your investigators critical context so that they can determine quickly whether the behavior is genuinely suspicious or not.

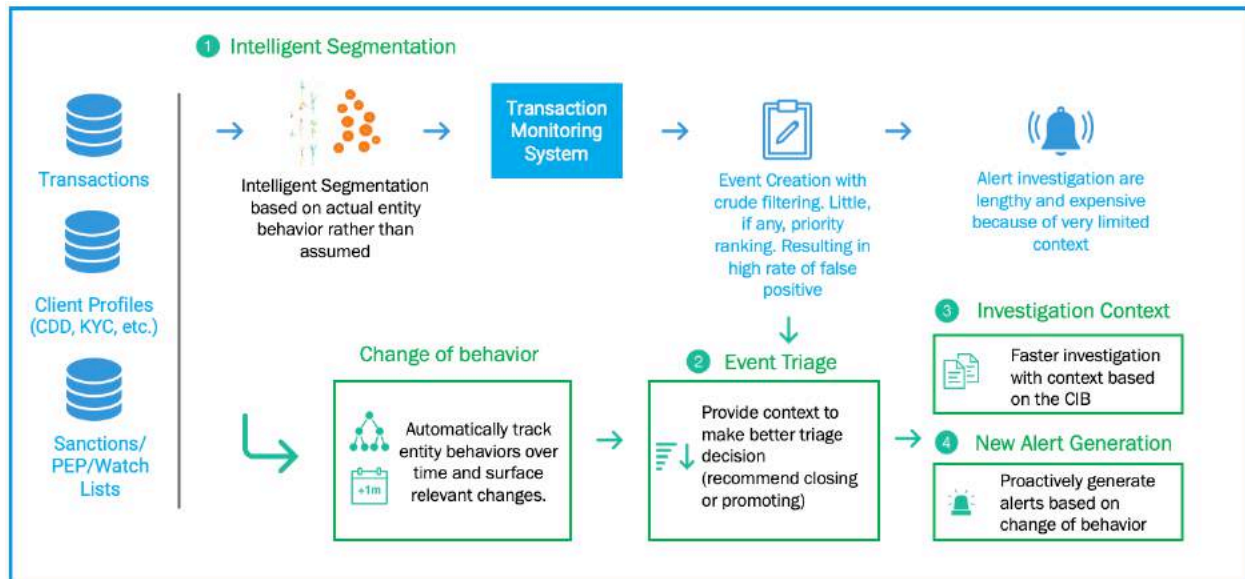
Auto Feature Engineering

A typical constraint for AI-based AML solutions is the data science feature generation bottleneck:

- Data wrangling to load data for selection
- Data engineering to build features worth consideration
- Manual trial and error process to select best features for desired outcome

This manual, bias-strewn, select-attempt-fail-select again approach, takes time, proves costly and because of human limitations, still fails to accommodate all the possible data available or identify the best permutations to build the optimum value and volume models required.

In contrast, auto feature generation and selection quickly identify attributes within the data that contain signal. The solution then automatically creates new derived attributes that accelerate intelligent segmentation. This removes the reliance on solely data scientist resources and allows your teams to focus, more rapidly, on producing the desired outcomes.



An augmented AML process applies intelligence at key lever points to produce significantly more accurate alerts.

Manual Feature Engineering		Auto Feature Engineering	
Data wrangling	←	Auto data load, intelligent ETL/ELT	
Data engineering		All columns and all rows	
Trial & error (partial set)		Unbiased, all permutations	

Superiority of an automated feature engineering and selection process versus traditional methods.

Roadmap to Next Generation Monitoring

Ayasdi AML is designed in 3 parts, TMS optimization, emerging behaviors and new entity risk detection, to allow you to take advantage of just what you need, when you need it. That is, you buy, only what you need, to improve the parts of your process that are weakest.

The design also allows for a 3-phase roadmap to the retirement of your existing TMS or supercharge the one you already have. Allowing you to build a clear runway to cost reduction, process efficiencies and absolute risk discovery and coverage improvements without the need to rip-and-replace.

1

TMS Optimization focusing on improving the effectiveness in discovering “Known Knowns”

Optimize your existing TMS with greater segmentation accuracy of all parties and improve the speed, accuracy and effectiveness of your periodic threshold tuning process.

2

Emerging Behavior Identification focused on “Unknown Knowns” and keeping your TMS relevant

Introduce dynamic, intelligent tuning and visibility to emerging behaviors to your process and retire the periodic projects that are so costly, cumbersome and immediately outdated.

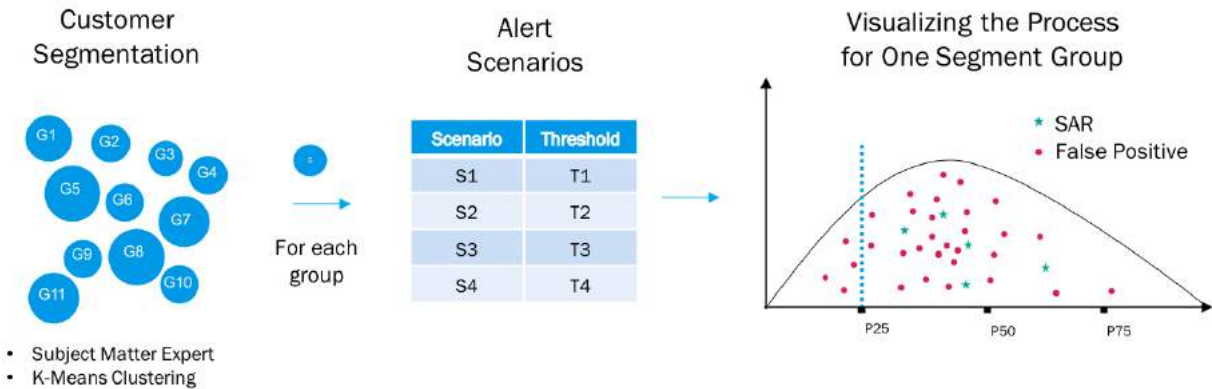
3

New Entity Risk Detection discovering net new “Unknown Unknown” risks and attacks previously missed or not thought about

Identify and be alerted to new risks. Not just at a transaction level, or account, or customer, but for any context, party or hierarchy and not just for AML but for AML, fraud, cyber, surveillance, conduct, trafficking, liquidity exposure, credit risk and beyond.

1 TMS Optimization: Intelligent Segmentation

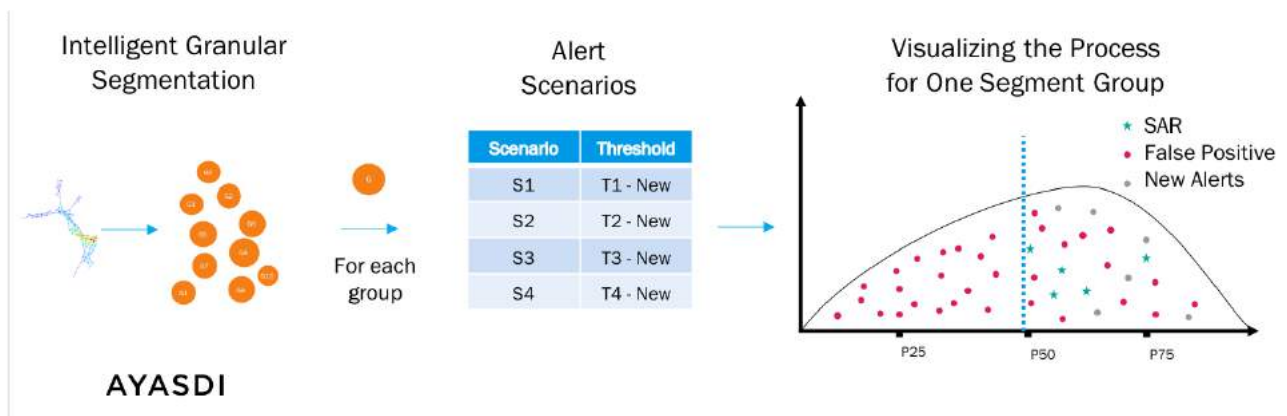
The false-positive problem in AML is primarily a function of poor segmentation of the input data. Even sophisticated financial services institutions using machine learning for detecting AML can suffer from low accuracy and high false negatives. This is because open source machine learning techniques analyze data in large groups and cannot get specific enough to correctly surface genuine suspicious behavior.



A typical segmentation process produces uneven groups, and this means that thresholds must be set artificially low – resulting in a significant number of false positives (shown in red).

Smart segmentation is the crucial first step for a transaction monitoring system (TMS) to accurately detect suspicious patterns, without needlessly flagging expected ones. The process falls short when institutions only sort static account information using pre-determined rules.

Ayasdi AML ingests the greatest volume and variety of data available—about customers, counterparties and transactions—and then applies objective machine learning to create the most refined and up-to-date segments possible. The crucial difference is that Ayasdi AML assigns—and reassigns—parties to segments based on their actual behavior, revealed in their real transactions and true inter-relationships, over time.

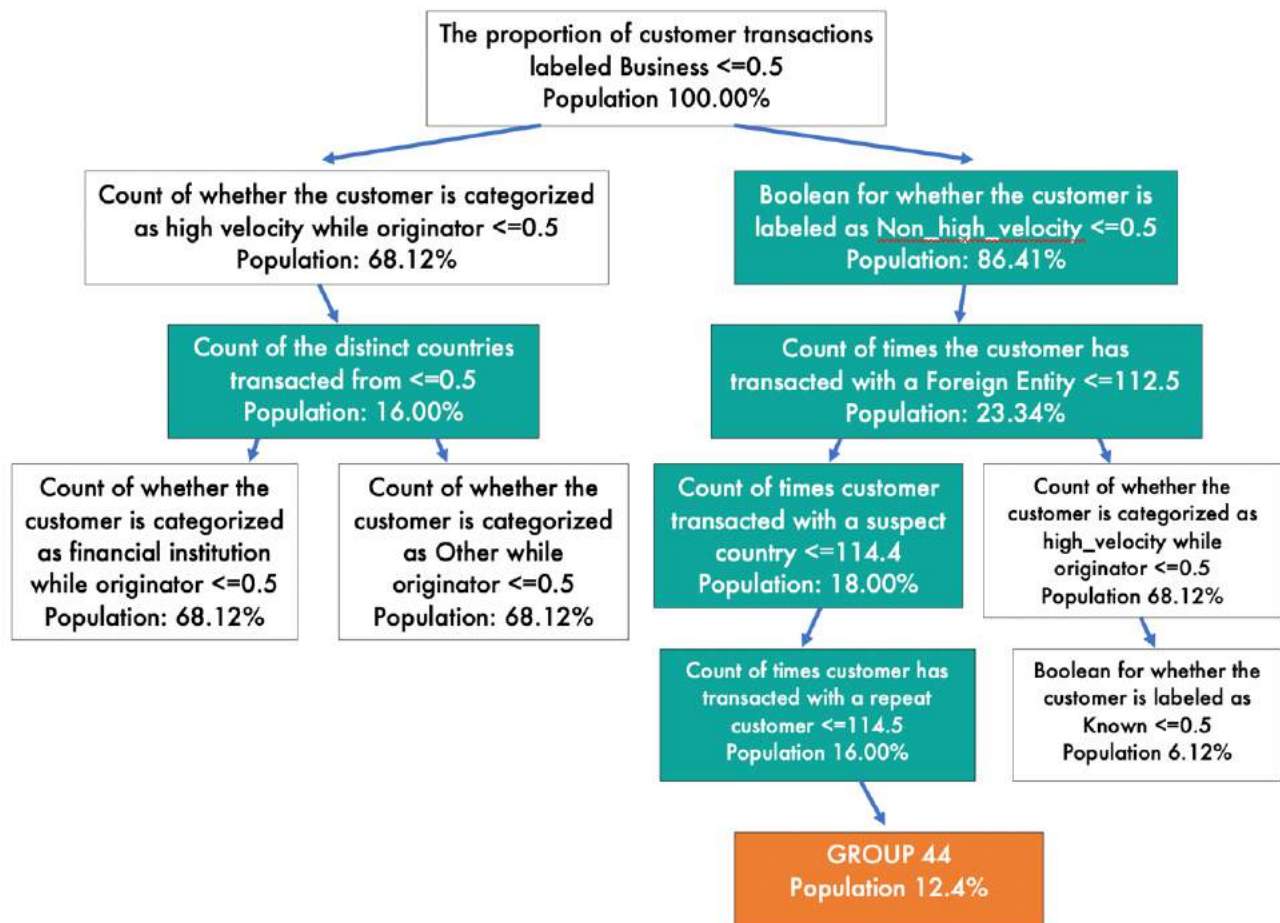


An intelligent segmentation process delivers far more granular and uniform groups, resulting in higher thresholds and fewer false positives. In addition, these granular groups catch false negatives.

Ayasdi AML analyses all newly arriving data, identifies changing patterns, and suggests updates to segments and rankings based on new information. As a result, it readily identifies subtle patterns suggesting emergent behavior for consideration by subject matter experts.

Further, the more data sources available, the better the grouping that results from Ayasdi AML segmentation. More importantly, Ayasdi AML technology does not require labeled data to derive an initial segmentation. Removing the requirement for labeled data permits substantial expansion of the number of data sources, including customers of a bank's customers (KYCC).

Ayasdi AML provides complete transparency into what drives the segmentation. Ayasdi AML produces a complete documentation workflow containing simple decision trees that can be shared with internal model governance boards and with external regulators.



Decision trees are excellent ways to visualize complexity for regulators and internal model review boards and are a key part of the justification step in AML.

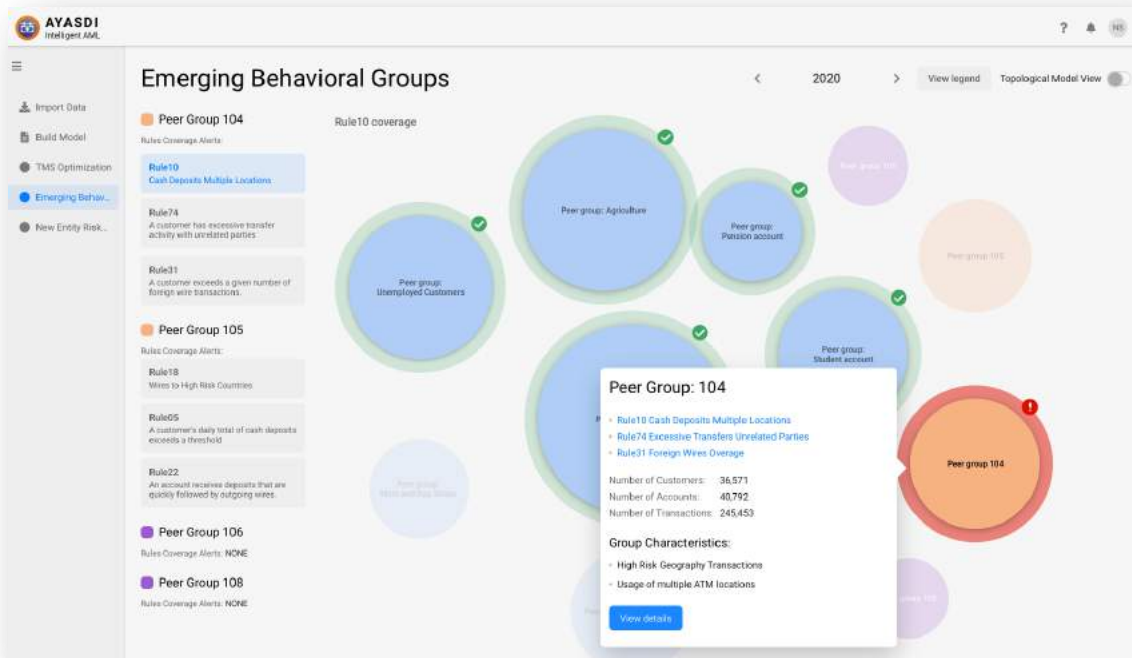
2 Emerging Behaviors: Insights from Change

Because Ayasdi AML analyses customer transactions daily, it automatically generates lists of, and can alert against, customers showing changes in behavior over time, such as:

- The customer's behavior deviation over time, based on specified thresholds
- The changes in a party's behavior compared to their peers in their segment
- The deviation in customer behavior compared to the information provided during KYC – Deviation to "Nature & Purpose"
- Party migration between and across segments

Knowing which behaviors, scenarios and typologies your TMS rules currently address is only part of the management challenge. Every day, changes to products, geographies, regulations, acquisitions, source data can undermine the work you performed in your prior tuning exercise.

This leaves you exposed to risks from those new and emerging behaviors. AyasdiAI AML provides detailed, auditable reports to highlight emerging behaviors and further, the existing rule applicability to immediately address them, providing detailed segment characteristics and membership insight.



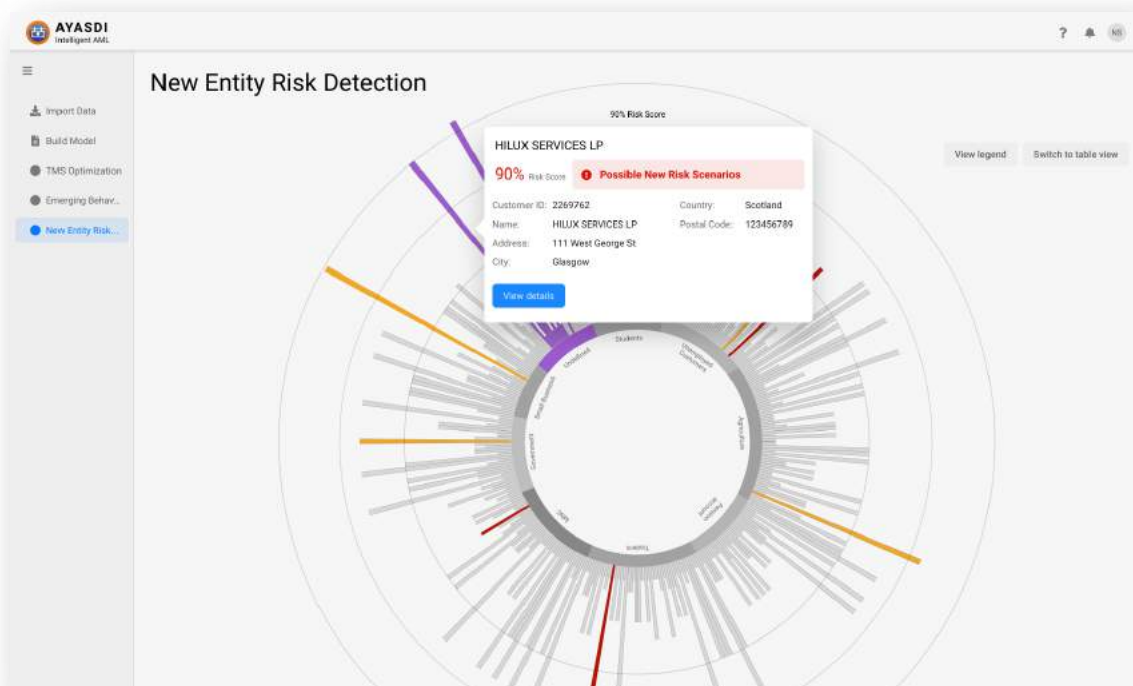
Behavioral segmentation provides insights to investigators about changing party behaviors

3 New Entity Risk Detection: Net New Risk

But what about those risks that your rules cannot cover? Those same business, customer, regulatory and industry changes abound, creating new behaviors, new risks, new threats to your organization. AyasdiAI AML has you covered.

With an intuitive and insightful human UI, driven by a powerful, easily integrated alerting engine, any risk, capable of being digitized, can:

- be discovered
- be alerted
- be sent to case management,
- be visualized,
- be investigated,
- be escalated,
- be added to a watch cycle,
- automatically create a segment for subsequent monitoring
- submit data to any auto CMS/SAR/STR system you use
- discover not just AML but precursors to laundering – tax evasion, fraud, trafficking



New enterprise risks, identified at the party/entity level can be auto alerted and visualized, contextually, for confidence and peace of mind that your institution is fully aware of and prepared for them.

Ensuring that you are fully covered for all known and known, knowable and currently unknowable risks.

New entity risk detection, provides a summary of all risks in a single view, enabling instant visualization and machine or human prioritization, in line with your institution's appetite for risk and backs it up with deep, drillable, pre-fetched, pre-aggregated and enriched party data. Account behaviors, credits, debits, payment histories, payment flow visualizations and more are all available to give a holistic and clear picture to your investigator and analyst community.

Summary

"Indispensable. Trusted. Transformative."

Client deployments are governed by SLAs focused at:



Ayasdi AML applies unique and industry superior AI plus intuitive and insightful user interfaces to the mission-critical AML regulatory function, dramatically improving program efficiency and effectiveness while simultaneously reducing regulatory exposure. Ayasdi AML provides exceptional transparency to understand how the solution operates and critical details to investigators, regulators, and law enforcement.

To find out how to leverage AI for your AML challenges contact us at sales@ayasdi.com to arrange a demonstration.

About Symphony AyasdiAI

Symphony AyasdiAI, part of the SymphonyAI Group, is the world's most advanced artificial intelligence software company. Symphony AyasdiAI helps organizations discover new and valuable insights in enterprise data. With unprecedented accuracy, transparency, and speed. Built upon over a decade of research and experience, Symphony AyasdiAI delivers insights to Fortune 500 companies and public sector organizations to capture growth, avoid risks and manage inefficiencies. www.ayasdi.com

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