QuantaVerse

GLOBAL BANK FINDS MONEY LAUNDERERS MORE EFFECTIVELY AND EFFICIENTLY USING QUANTAVERSE DATA SCIENCE POWERED SOLUTION

OVERVIEW

One of the world's largest banks, serving millions of customers around the globe, wanted to increase its effectiveness in identifying suspicious activity that could be indicative of money laundering. While the bank was in compliance with relevant anti-money laundering (AML), Bank Secrecy Act (BSA) and Know Your Customer (KYC) regulations and mandates, it was interested in enhancing its compliance capabilities to further reduce risk. Upon learning of a new, data science powered solution purpose built to identify money laundering in the banking industry, it chose to evaluate its effectiveness.

BUSINESS DRIVERS

The bank has four primary business areas – retail banking and wealth management, commercial banking, global banking and markets and global private banking. Solely through its correspondent bank relationships, it processes several million transactions each month. Like most global and many large regional banks, the bank is an attractive target for financial criminals in need of banking platforms through which to launder their dirty money.

It's been estimated that two to five percent of global GDP is laundered each year, an amount thought to be between US$1.4 and US$3.6 trillion in 2014 alone. While it is difficult to determine exactly how much money laundering occurs via legitimate bank platforms, even a conservative estimate points to the laundering of significant dollar amounts. And given that this laundered money is garnered through a variety of unlawful activities including illegal drug sales, prostitution and human trafficking, and often used to fund terrorism and other crimes, any amount is too much.

It is also difficult to assess the precise amount of dirty money that goes undetected by banks' traditional, human-centric investigative processes. However, banking industry experts generally agree that current efforts focused on eliminating bad actors from banking systems are not effective enough, while being costly and time consuming.

Given this situation, the bank profiled here was anxious to evaluate the effectiveness and efficiency of QuantaVerse's new data science solution. (http://www.quantaverse.net/risk-solutions).

Money Laundering Lifecycle
2%-5% of Global GDP is Laundered Each Year, Estimated at $1.4T-$3.6T in 2014

Dirty Money

Placement

Clearing

Integration

Laundered Money

Terrorism
Human Trafficking
Bribery & Extortion
Drugs
Illegal Arms Trade
Prostitution

PUTTING THE SOLUTION TO THE TEST

As an initial test of the QuantaVerse solution, the bank provided the QuantaVerse team with one month's worth of transaction data from 13 correspondent banks. This represented 0.5 percent of its total correspondent banking transactions.

The QuantaVerse solution, which consists of a series of data science powered analysis engines, uses proprietary methodologies, algorithms, and tools to ingest and process data from a wide variety of internal and external sources, many of which are currently unavailable to, or typically unassessed by banks. These data sources include unindexed deep and dark web data, open source public Internet data, and a number of government or commercially produced datasets containing information on known

financial criminals and other prohibited or high-risk persons or entities of interest. The platform also ingests and analyzes current transaction data and basic customer information from the bank's own operational systems. In this instance, QuantaVerse began by running a multivariate analysis on the month's worth of transactions provided by the bank. It focused only on the data provided by the bank, pulling in no externally available data. As the name suggests, multivariate analysis uses statistical techniques and mathematical algorithms to analyze data sets by looking at more than one variable, often simultaneously.

QuantaVerse first ran the bank's transaction data set through several algorithmic filters including collaborative filtering, clustering analysis and anomaly detection. This simple first step, which took less than a week identified US$6.2 million that had been laundered.

Based on that outcome, the bank provided QuantaVerse with two years' worth of transactions. These transactions were subjected to more extensive algorithmic analyses.

QuantaVerse Risk Reduction Solution in Action

- Collaborative Filtering- Found transactions with missing, matching and/or odd information

- Feature Matching- Found a large number of transactions below $10k

- Fuzzy Logic- Found data matches with slight changes of names or addresses

- Cluster Analysis- Found abnormal amount of transactions going to same party

- Time Series Analysis- Found transactions going to the same party over an extended period of time.
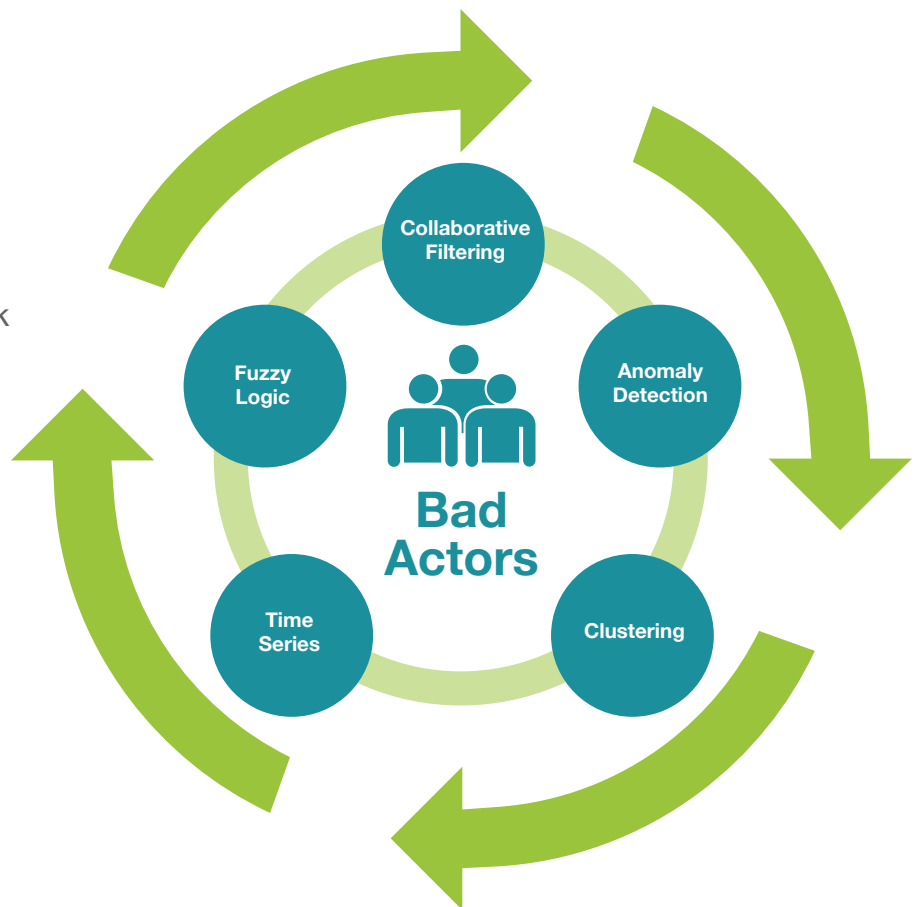
This is a limited example of the types of algorithms that QuantaVerse uses to detect financial crimes. There are dozens more continuously analyzed transactions and hundreds of thousands of entities examined in order to uncover bad actors.

As a result of this multivariate process, QuantaVerse found many more questionable transactions being run through the bank each month. The parties identified by this process included criminal individuals, shell corporations, and a law firm that created the identified shell corporations.

Although the bank was in compliance with regulatory requirements, it is not enough to prevent financial crimes. Had banking industry regulators found these suspicious activities and suspected bad actors independently prior to the bank identifying them, the result could easily have been the imposition of hefty fines with the potential to not only impact the bank's bottom line, but to also severely damage its reputation and threaten its existence as a leading global bank.

THE QUANTAVERSE FINANCIAL CRIME DETECTION MODEL

"We applied data science to help the global banking industry which is subject to heavy regulation and risk due to financial crime perpetrated against them. We make their AML efforts more effective and efficient," explains QuantaVerse CEO David McLaughlin.

"Regulatory statutes aside, no bank wants to be used by financial criminals seeking to further their illegal and immoral money laundering schemes. Our solution combines sophisticated data science tools and methodologies with a robust technology platform capable of storing and rapidly accessing enormous volumes of structured and unstructured data, and unparalleled access to rich, relevant external data sources including open web, deep web, dark web, government and commercial data. Prior to the availability of our solution," McLaughlin adds, "no particularly effective and efficient risk reduction solution existed that could help banks stay a step ahead of criminals and satisfy the expectations of regulators."

The QuantaVerse Solution

Sophisticated Data Science Capability

Technology Platform

Rich Data Sources

Key Benefit: Eliminates Inefficient, Costly, and Ineffective Human Dependencies

Resulting in: Less Financial Crime Missed and Fewer False Positives

TURNING THE TABLES ON FINANCIAL CRIMINALS REQUIRES RELENTLESS, PENETRATING SCRUTINY

With financial criminal activity not likely to decrease, and with ever-evolving regulations and detection systems increasing pressure on banks to improve their AML detection capabilities, it's not surprising that a number of banks have adopted the solution or are investigating the ways in which the solution might help them dramatically reduce the risks of clients using bank platforms to support their illegal activities.

"To paraphrase a line from an old TV commercial," says McLaughlin, 'criminals never sleep.' From the results we've produced to date, however, we expect our non-stop, rigorous, automated analysis to force them to spend more of their waking hours trying to evade the relentless, penetrating scrutiny of data science."

ABOUT QUANTAVERSE, LLC.

QuantaVerse is the emerging leader in data science-powered risk reduction and revenue growth solutions, purpose-built for the banking industry. Founded by financial services industry veterans and innovators, QuantaVerse solutions employ proprietary data science algorithms, integrate and filter internal bank data and related external data – including public Internet data, unstructured deep web data, as well as government and commercial datasets – to help the banking industry to significantly improve their compliance with AML, KYC and BSA regulations and requirements. QuantaVerse solutions also drive revenue by turning KYC data into strategic insights about the markets and customers they serve.