Path to Intelligent Transaction Monitoring

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He has over 20 years combined experience in banking, management consulting and academia. Mayank specializes in compliance analytics and surveillance technology (fraud prevention and Bank Secrecy Act (BSA)/Anti-Money Laundering (AML), Economic Sanctions and Foreign Corruption).

Prior to joining First Republic, Mayank was a management consultant (advanced risk and compliance analytics) at PwC, overseeing the Financial Crimes Risk West coast practice.

He earned his masters in computer science from the California State University and also has a PhD in economics.
SCOPE

What can financial institutions accomplish today with the People, Process and Technology they already possess while leveraging low cost open source technologies?

• Data Governance & Consolidation: Blend data to improve investigation

• Application Development: Use existing technology based custom application design tailored to BSA/AML needs

• Machine Learning: Behavioral segmentation and alert outcome prediction
A SCALABLE APPROACH

The cost of regulatory compliance continues to grow while reliance on people has a “ceiling” beyond which process and technology has to be relied upon.

Technology in concert with Process change opens new fronts for improving efficiency.
OVERCOMING THE FEAR TO INNOVATE

In order to overcome the fear to innovate

• Encourage Creativity & Agility
• Escape Business as Usual
• Think beyond Human Intelligence
• Think Business & Artificial Intelligence

People → Process → Technology

Efficiency
Risk Reduction
New technologies have changed the BSA/AML landscape, enabling more automation solutions. Invest in your internal technical “In-House” application development capabilities so innovation can scale in an natural agile way without excess cost

- **Access.** Web user interface, big data, APIs …

- **Automation.** Tuning/Quantitative Techniques/ Dashboards/Automated routines/ RPA/R/Python/NLP/Big Data Technologies/Cheaper Hardwar & Software/Machine Learning

- **Visualization** to harnesses the power of human perception to detect suspicious patterns

- **Pull from disparate systems**

- **Consolidate All Known Data**

- **Export to Excel**

- **Data Clean-Up**

- **Pre-fill SAR Narrative**

- **Expected Activity**

- **Actual Activity**

- **Consistent QA Process**

- **Learn more from data**

- **Capacity Increase**

- **Avoid Manual Errors**

- **Format as Pivot Table**
KEEP IT SIMPLE

First, identify and automate the low hanging fruits

• Stay focused on a viable product for **incremental & iterative** time gains

• **Make a map**: identify processes that are simple to automate but will save time

Second, automate all aspects of BSA/AML
Simply stated, Machine Learning is the process of automating a feedback loop of data to aid in outcomes formerly performed by a human.

**Unsupervised Learning.** Harnessing unlabeled data by using techniques such as clustering, associative learning and other techniques to track interactions, behavioral segmentation etc.

**Supervised Learning.** Predict alert outcome by leveraging historical alert disposition data and predictor variables.
In-house developed platform using Tableau for consolidating all information about a customer (accounts, KYC etc..) into a central application with a single login.
**Network Analysis**

Data mining tool that outputs data in an optimized format for link analysis software.

**Leverage** fuzzy name matching algorithms to chase transactions by degrees of separation.
**SELF-SERVICE DATA**

Organizational Maturity

- **Path to Intelligent Transaction Monitoring**

Data is pre-formatted to provide timely and additional insight with impact on organization efficiency.

Characterized by heavy reliance on manual process, investigation is sub-optimal.

Ad hoc data requests

- **On demand visuals**
- **Ad hoc data requests**
- **Click-Through & Drill Down**

**Goal**

Ready Availability

On demand visuals

**Investigators do not have self-service capability, insight & accessibility are limited by disparate systems, manual & unstandardized processes.**
Path to Intelligent Transaction Monitoring

- Automation
- Data Visualization
- Data Consolidation
- Predictive
- Indicators