



Combating Financial Crime with Graph Analytics

June 10, 2021



Today's Speakers



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Some Housekeeping Issues

- Although your phone is muted we do want to answer your questions - **submit your questions at any time** using the Q&A tab in the menu



- The webinar is being recorded and will be uploaded to our website shortly (<https://www.tigergraph.com/webinars-and-events/>) and the URL will be emailed to you
- If you have issues with Zoom please contact the panelists via chat

Today's Financial Crime Landscape

INTERNAL CHALLENGES

Inconsistent policies and procedures



Static Risk Segments



Inefficient & fragmented processes

Static monitoring rules with high false positives

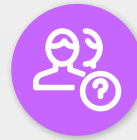


Duplicated effort across teams



Lack of governance & accountability

Manually driven investigations



Lack of traceability for data feeds & user access

EXTERNAL PRESSURES



Customers



Government & Regulators



Financial Crime Transformation Journey

TODAY

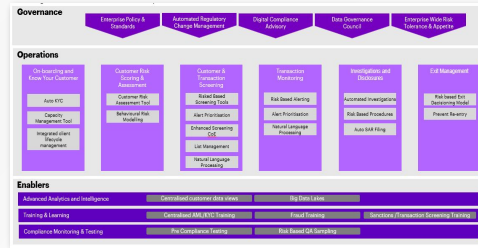
Manual Intensive, Static Rules Driven Model



- **Fragmented**, silo-ed approach
- **Static** Monitoring & Screening rules
- **Non-risk based**; **Non-streamlined** Operations
- **Manual**

NEAR FUTURE STATE

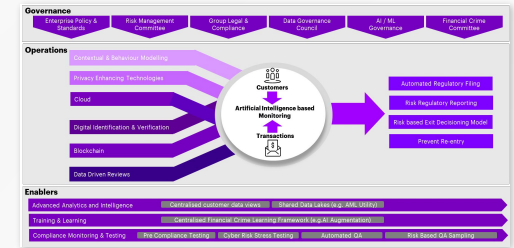
Risk Based Rule Driven, Semi-Automated Model



- **Consistent** policies & standards
- **Risk-based, Big Data driven** TM & Screening rules
- Enterprise wide **risk tolerances**
- **Streamlined, semi-automated** operations
- **Managed services**

FUTURE STATE

Self Learning, Intelligent, Optimised Ecosystem



- **Enterprise-wide adoption** of policies & standards
- **Pattern & risk-based** screening / monitoring
- **Continuous KYC** and **Digital Identities**
- **Self-learning & automated** Operations



Key 2021 Financial Crime Challenges

New Criminal Activity



e.g. money laundering via **cryptocurrencies** and other virtual assets

Public – Private Collaboration



Coordination between **obliged entities, regulators, and service providers** is limited

Effects of the Pandemic



Criminals are exploiting **new opportunities** and we need to adapt to **monitored vs. “normal” customer behaviour**

Green Crime ML Typologies



e.g. **wildlife trafficking, illegal mining and logging**

Data Quality & Management



Data is a key foundational requirement for any business looking to embrace new innovative technology & analytics

AML Regulatory Expectations

1



Increased global consistency

Controls applied consistently across geographies

Business lines informed about their own controls and where they rely on the Group

2



Complete coverage

No gaps in transactional coverage

Balanced with specialised detection for complex areas e.g. markets, trade finance & correspondent banking

3



Feedback loops

Insight gained from transaction monitoring or screening should inform (or even trigger KYC reviews)

Changes in customer data should be assessed for risk

4



Explainability

All models used to detect possible money laundering and terrorist financing should be explainable

Data should be traceable

Combating Financial Crime with Data & Analytics



Why take a more data & analytics-driven approach?

Improve compliance and risk management

Reduce manual effort

Realise benefits from digital transformation

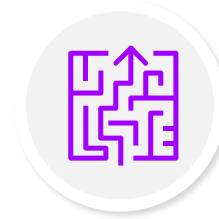


Where are the key areas of opportunity?

Better data sourcing

Identification of risk via analytics

Operational efficiency via the use of big data, AI & NLG



What is important to get right on the way?

Team content specialists with data engineers and data scientists

Design for explainability

Leverage the experience of others

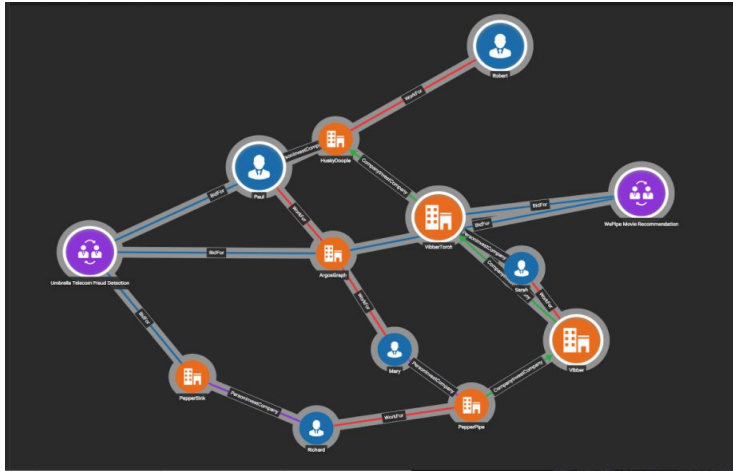
Poll Question #1

What one of the following is most characteristic of your AML investigations? [Pick all that apply]

- Too many false positives
- Too many inconsistencies in output
- Too much missing information
- Too much time required to complete

Graph Analytics

Graph analytics is the analysis of relations among entities such as customers, products, operations, and devices

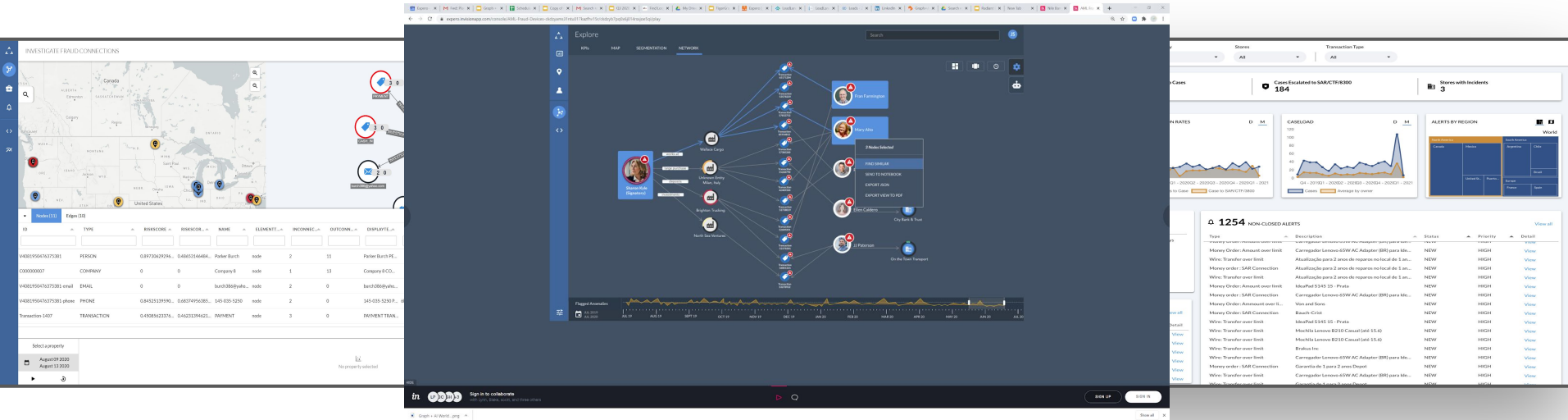


A graph databases consist of **vertices** and **edges**

- **Vertices** - data entities
 - for example - person, account, transaction
- **Edges** - the relationships between those entities
 - for example - person opens account, money moves from one account to another account

A graph stores the relationships between data entities - or can be used to uncover relationships between data entities

Better Investigative Insights



- Deep link analytics allows you to see complex connects, run detection in real time and gives your investigators the tools and evidence to shut down criminal activity as it is happening

Graph Helps Combat Money Laundering

Pattern Detection: Sudden increase in activity in online transactions

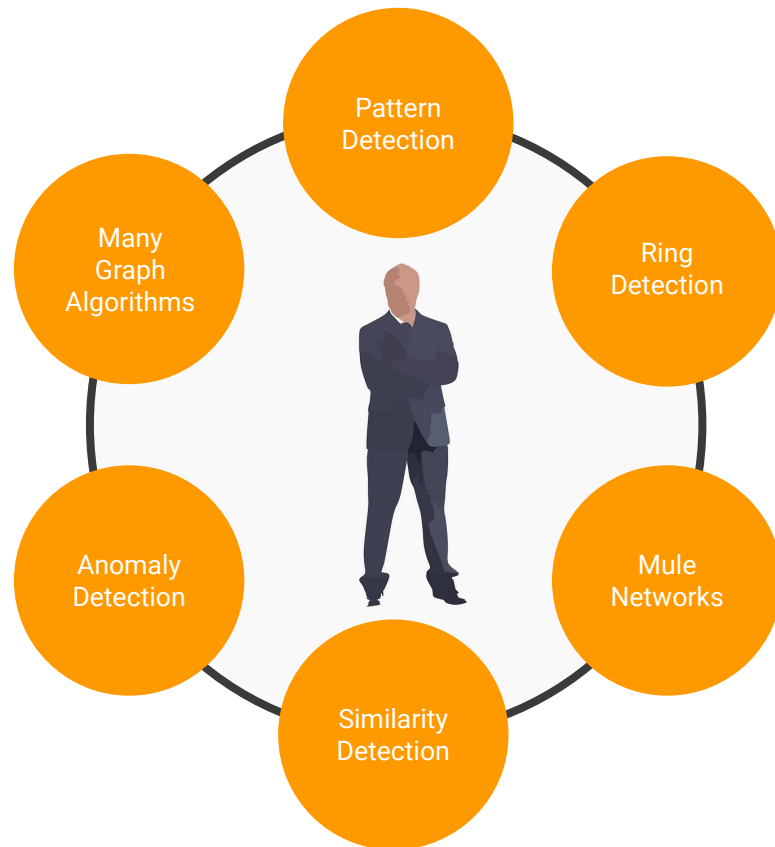
Ring Detection:

Step 1: Community detection based on edges/attributes

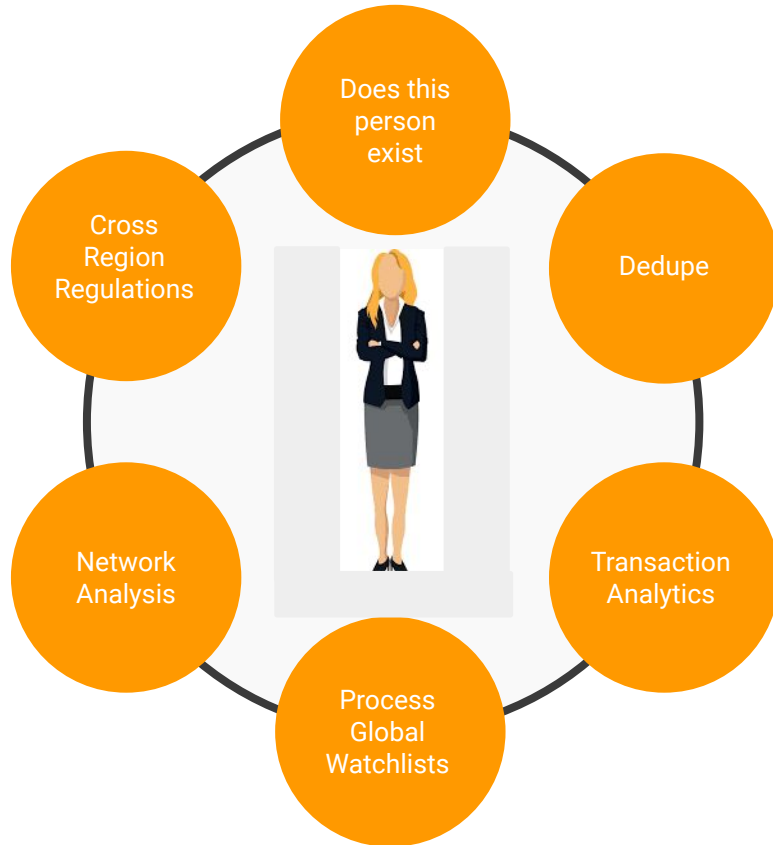
Step 2: PageRank the nodes/credit card

Step 3: Pick up communities with highest/average page ranks

Similarity Detection: Find similarity based on money transfer patterns, geoloc proximity, transaction amounts

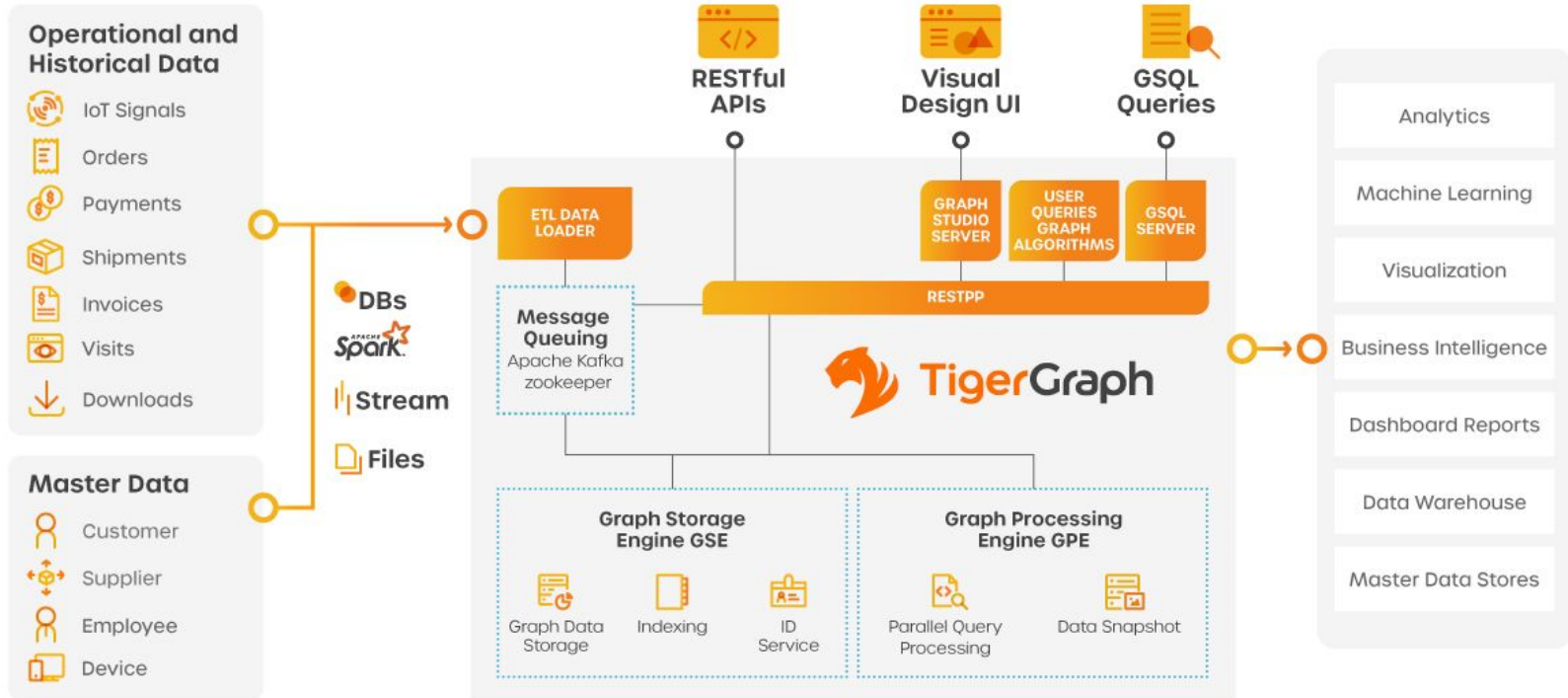


Graph Analytics Helps Combat Money Laundering



- **Entity Resolution:** Disambiguate data entities to obtain a clear record of potential money laundering activities
- **Entity Matching:** Match data entities to known terrorists, human traffickers, tax evaders, etc
- **Network Flow Analytics:** Map fraud rings to money flows from beneficial owners to placement, layering, and integration
- **Pattern Matching:** Search data to uncover patterns of suspicious financial activity
- **Deeper Analytics:** Traverse 5-10 data connections to uncover suspicious behavior that would otherwise remain hidden

Delivering New Graph Based Solutions with TigerGraph



Poll Question #2

What is preventing your organization from increased technology investment within your AML programs? [Pick all that apply]

- No major inhibitors
- Insufficient understanding of next-generation technology
- Cost and IT resource limitations
- Lengthy sales and deployment cycles
- Desire to avoid productivity impact during transition



Q&A

Upcoming Webinars

June 17 - **Accelerating Supply Chain Planning: A Case Study** - Scott Heath, Vice President of Customer Success, Expero

July 8 - **Supply Chain and Logistics Management with Graph Databases and AI** - Amadeus Tunis, Vice President of VP, Data & Analytics, Publicis Sapient

July 13 - Hewlett Packard Enterprise

August 2 - Xilinx

Learn about upcoming TigerGraph webinars at <https://www.tigergraph.com/webinar>

Contact Us



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Learn more about TigerGraph's partner program at <https://www.tigergraph.com/partnergraph/>



Thank You

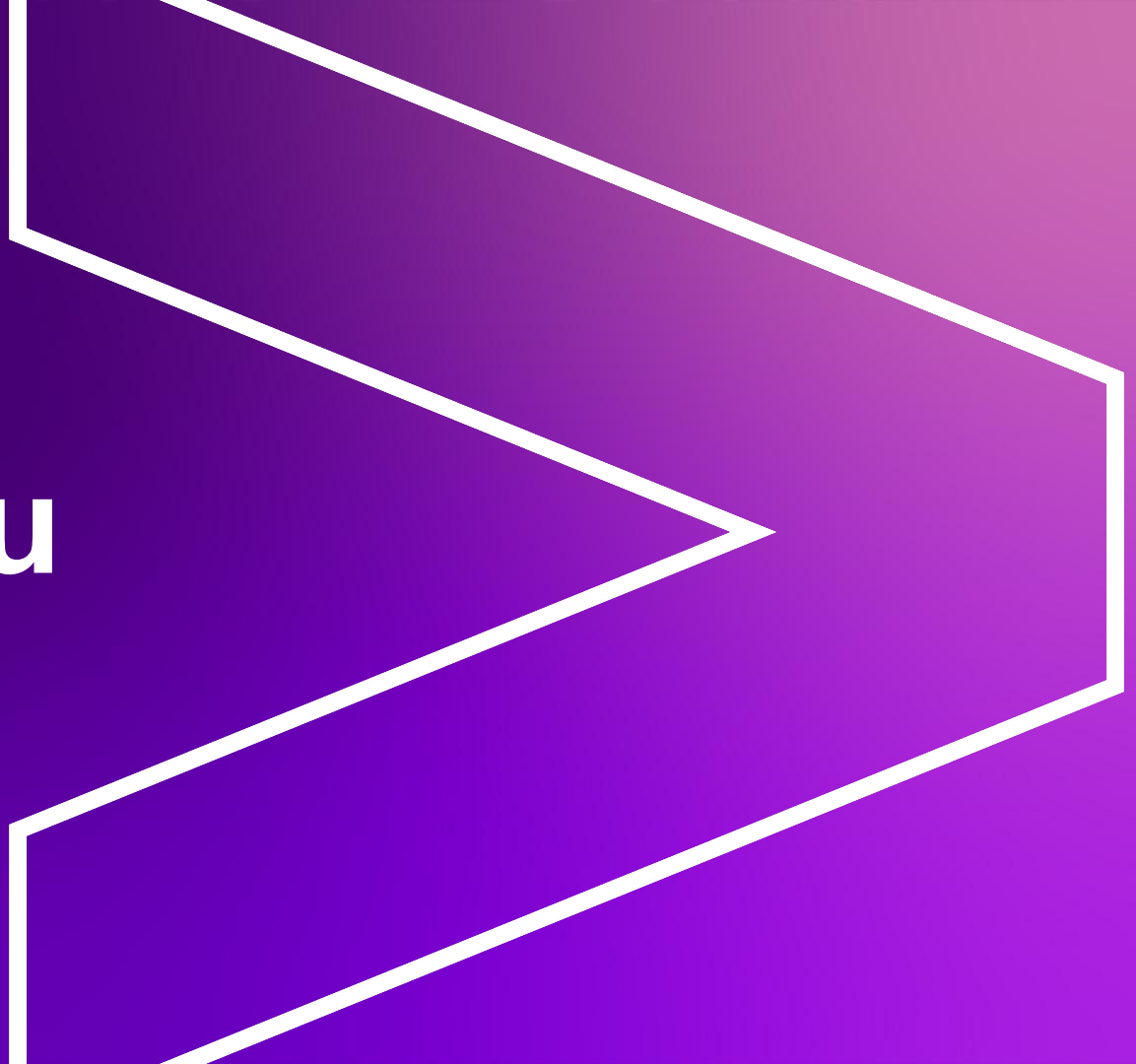


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10 June 2021

Heather Adams

Thank You



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