

# Anti-Money Laundering Compliance with Graph Technology

## Money Laundering Is a Big Problem

**\$2** trillion/year<sup>1</sup>

Up to **5%** of GDP globally<sup>2</sup>

It Funds **Criminal Activity**



Terrorism



Human trafficking



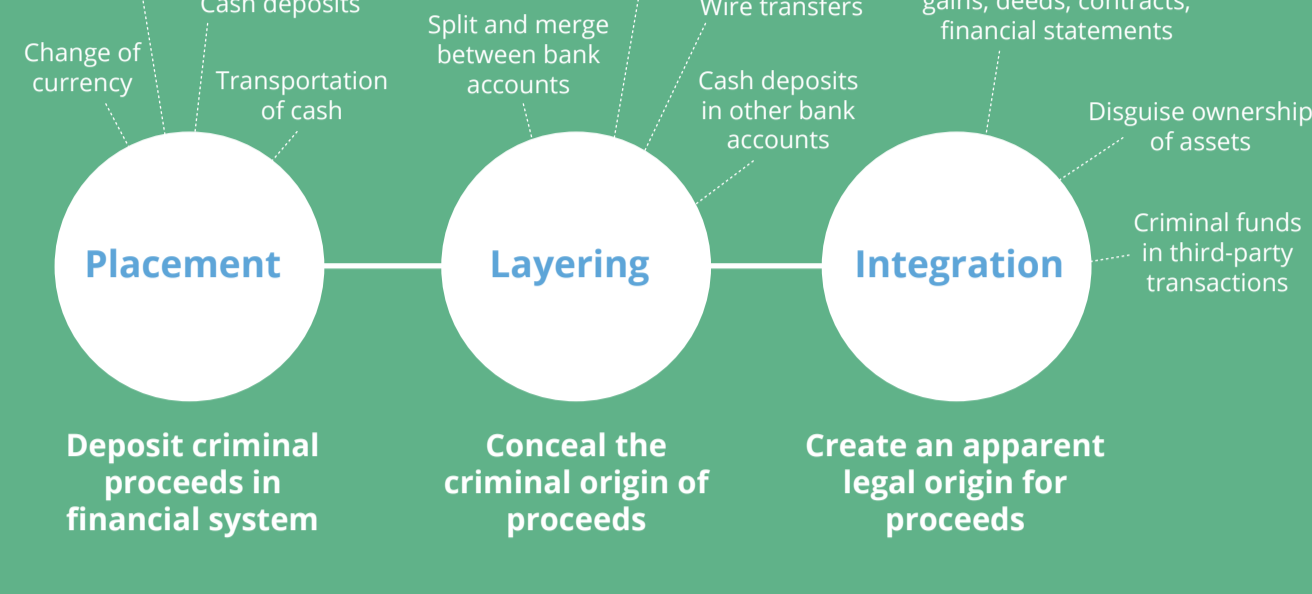
Drug trade



Organized crime

Failure to report suspicious financial transactions is a crime.

## How Money Laundering Works



## Businesses Must Report Suspected Money Laundering

Banks face the most regulations.



Other businesses coming under scrutiny include:



High-risk industries (gambling, real estate, art galleries, jewelers)



Large global companies



Franchises



Cash-intensive businesses (car washes, laundromats, convenience stores)

### Legal Compliance Example: AML4D

The EU's Fourth AML Directive (AML4D) requires:



Identifying all ultimate beneficial owners (UBO), who own or control as little as 10%



National registries of politically exposed persons (PEP) and people of significant control (PSC)



Monitoring credible media sources

## How Graph Technology Solves Compliance Challenges

### Challenges



Time & resource-intensive

**90%**

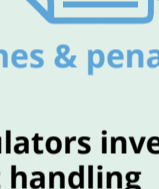
of alerts are false positives<sup>3</sup>



Expensive

**\$25.3B**

Annual AML compliance costs in the US alone<sup>4</sup>



Fines & penalties

Regulators investigate alert handling  
Example: 2300 employees per month<sup>5</sup>

### Solutions

#### Reduce false positives

Connected data more accurately identifies suspicious activity

#### Reduce cost

Graph algorithms for flow analysis, pathfinding and community detection reduce manual work

#### Traceability

Graphs provide clear data lineage to identify UBOS

### Graph Technology Is a Force Multiplier

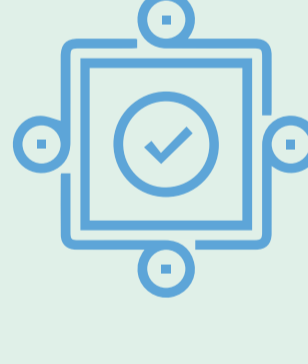
#### Analytical force multiplier

Flow analysis reveals hidden patterns of transactions

Community detection makes covert agents and transactions visible

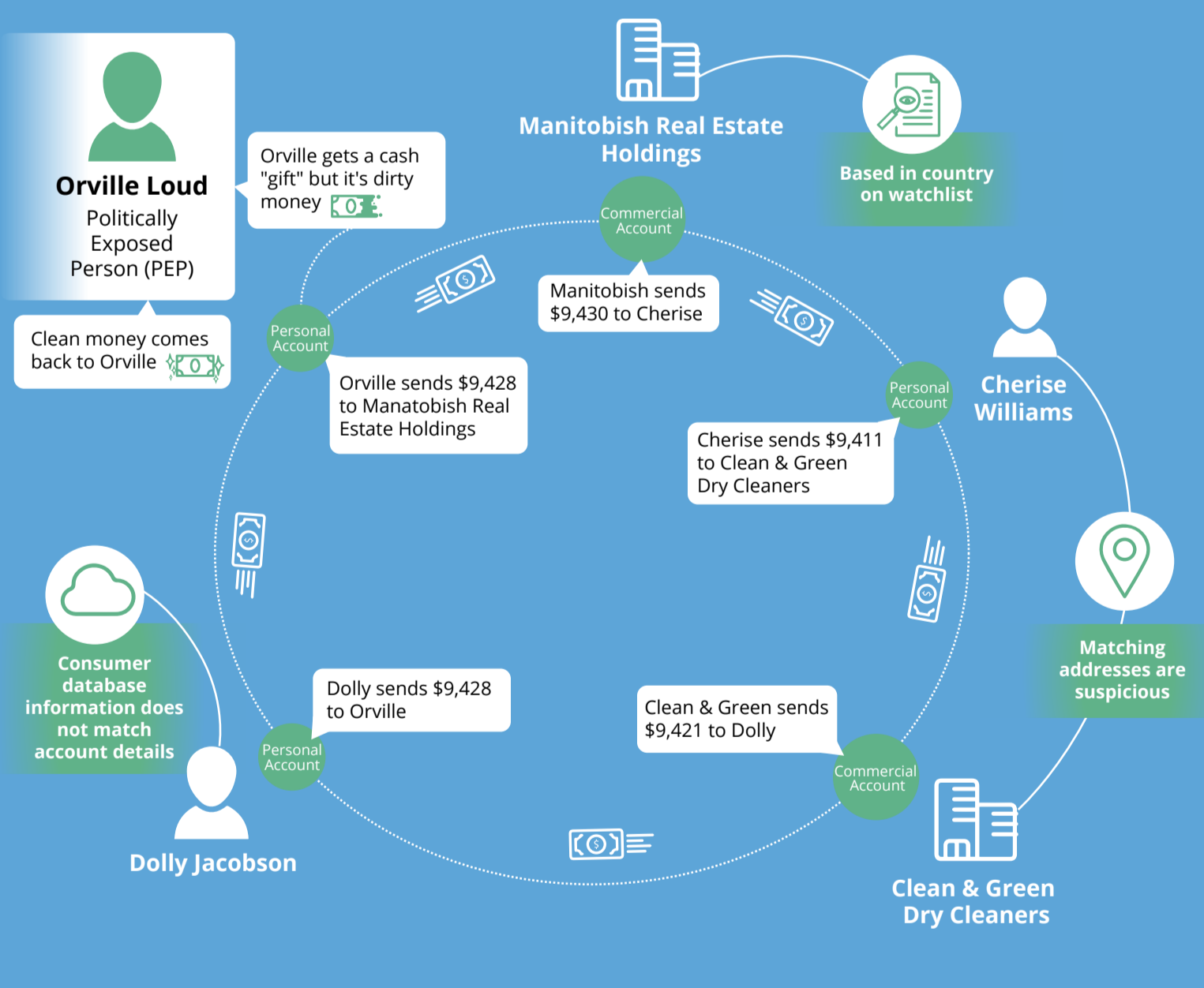
#### Employee force multiplier

Improved automation of false positive detection frees up AML analysts to investigate suspicious patterns that graph technology identifies



## Investigating Money Laundering

Circular transactions are a red flag for money laundering.



You're already looking for suspicious patterns; connecting your data in a graph database enables complex multi-hop queries at scale.

### Results with Neo4j

#### KERBEROS Compliance Management Systems

#### KERBEROS

Compliance - Management - Systeme

- Built its RegTech solution on Neo4j
- Maps 150,000 people, companies & documents, as well as 750,000 relationships between those entities
- Offers graph-based compliance solution for "high-risk" industries such as gambling
- Designed for compliance experts like lawyers, not technical personnel
- Attaches documentation directly to nodes in the graph for ease of reporting and compliance

#### ICIJ

- ICIJ put Panama Papers in Neo4j database
- 11.5 million documents, connecting data on 214,000 shell companies
- Sparked investigations in more than 82 countries
- Governments worldwide have recouped \$1.2 billion in taxes and fines so far; prosecution is ongoing

#### International Consortium for Investigative Journalism (ICIJ)

#### Global Money Transfer Company

- Money transfer company quickly performs AML investigations connecting 10,000+ transactions
- Analysts spot suspicious activity dynamically to pinpoint and stop money laundering
- Analysts follow up on tips from law enforcement in real time
- Compliance is now a competitive edge

Stop money laundering in its tracks using Neo4j.

LEARN MORE

1. UN: \$2 trillion globally per year; up to 5% of GDP  
2. UN: Up to 5% of GDP  
3. G2: 90% of alerts are false positives  
4. Lexis-Nexus: Compliance costs banks \$25.3B in US alone  
5. Global Financial Integrity: As few as 3 employees for 2300 alerts