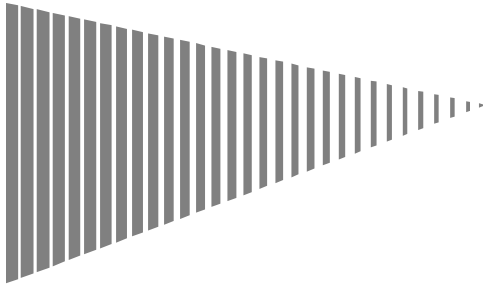
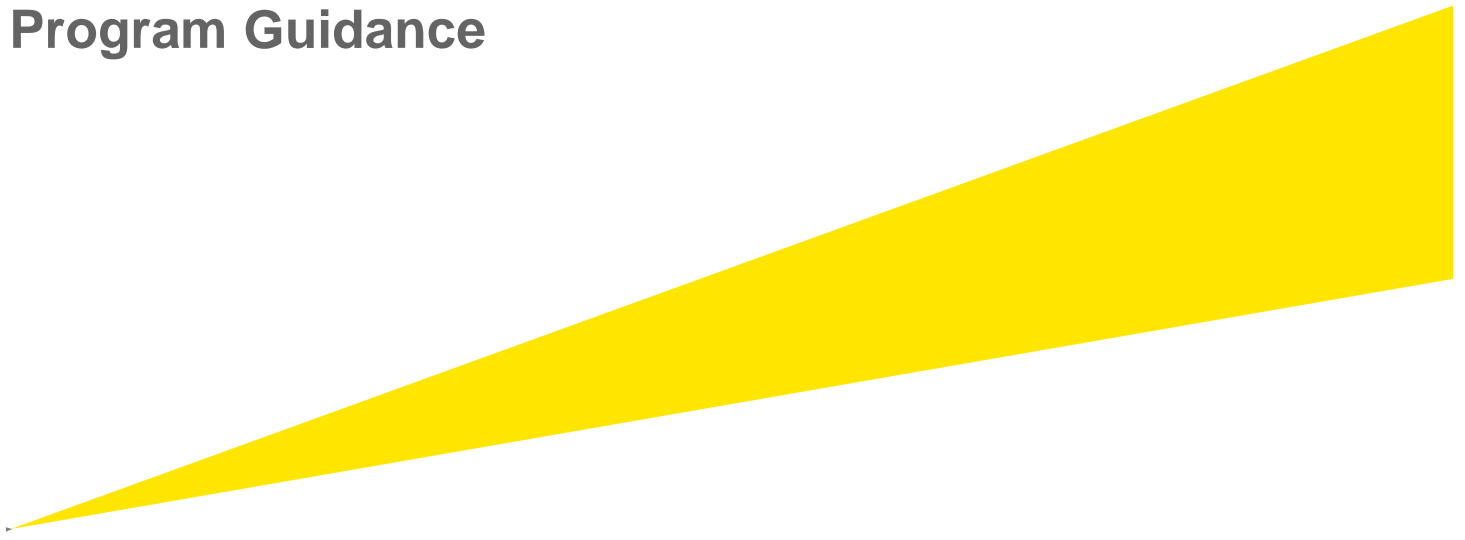


**Using analytics to your advantage –
interpretations from COSO’s new Fraud Risk
Program Guidance**



**Building a better
working world**



Topics for discussion

About the new COSO Fraud Risk Guidance to Principle #8

Mapping COSO to fraud risks and analytics examples

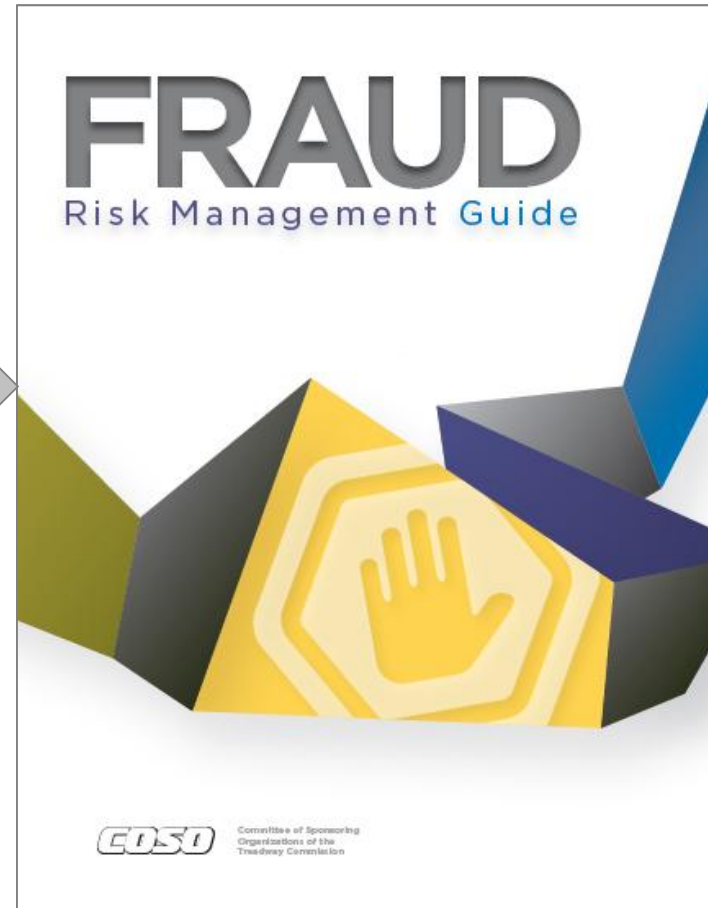
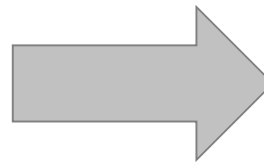
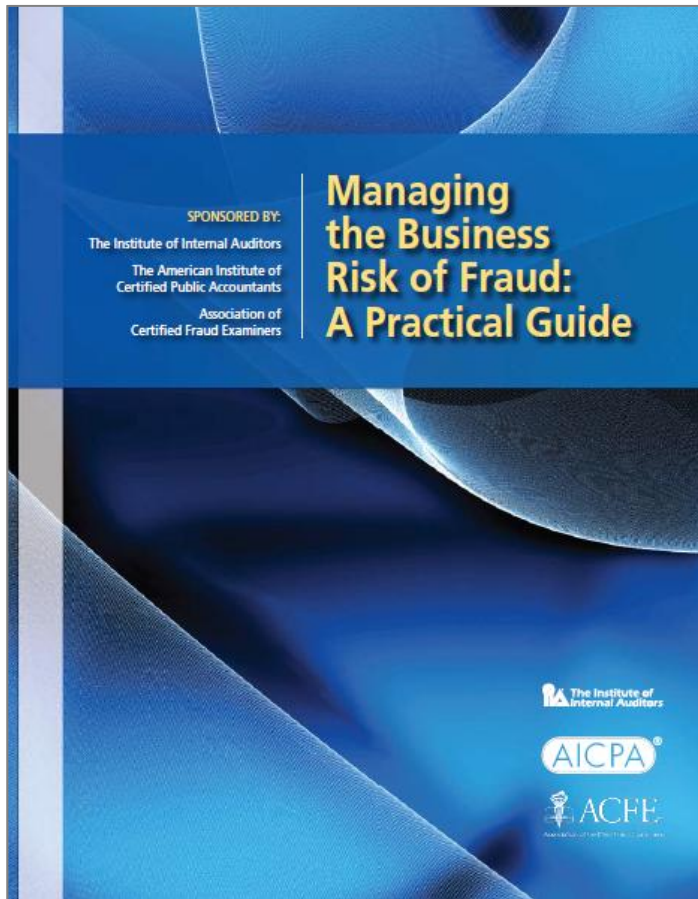
Fraud risk governance

Analytics use case examples

About the new COSO Fraud Risk Guidance to Principle #8



Progressing with the times



About the new COSO Guidance

- ▶ Stems from 2013 Internal Controls Framework
- ▶ Specifically addresses Principle #8 – Fraud Risk Assessment
- ▶ Incorporates previous ACFE / IIA / AICPA publication on “Managing the Business Risk of Fraud”
- ▶ Released September 2016
- ▶ Maps to the 17 COSO Internal Controls Principles set forth in the 2013 Framework
- ▶ Increased focus on data analytics
- ▶ Scope is broader than just doing “fraud risk assessments”

More than just a fraud risk assessment

Guide includes guidance on establishing an overall fraud risk management program including:

- ▶ Establishing fraud risk governance policies
- ▶ Performing a fraud risk assessment
- ▶ Designing and deploying fraud prevention and detect control activities
- ▶ Conducting investigations
- ▶ Monitoring activities

ROI considerations

2016 ACFE Report to the Nations



Companies without data monitoring/analytics in place suffered a median loss per incident of **\$200k** vs. \$92k with data analytics in place.

20 investigations per year x \$102k = \$2.16M in savings per year.

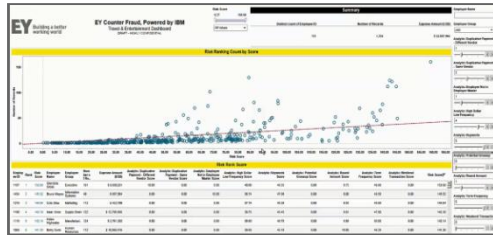
Figure 59: Median Loss Based on Presence of Anti-Fraud Controls

| Control | Percent of Cases | Control in Place | Control Not in Place | Percent Reduction |
|--|------------------|------------------|----------------------|-------------------|
| Proactive Data Monitoring/Analysis | 36.7% | \$92,000 | \$200,000 | 54.0% |
| Management Review | 64.7% | \$100,000 | \$200,000 | 50.0% |
| Hotline | 60.1% | \$100,000 | \$200,000 | 50.0% |
| Management Certification of Financial Statements | 71.9% | \$104,000 | \$205,000 | 49.3% |
| Surprise Audits | 37.8% | \$100,000 | \$195,000 | 48.7% |
| Dedicated Fraud Department, Function, or Team | 41.2% | \$100,000 | \$192,000 | 47.9% |
| Job Rotation/Mandatory Vacation | 19.4% | \$89,000 | \$170,000 | 47.6% |
| External Audit of Internal Controls over Financial Reporting | 67.6% | \$105,000 | \$200,000 | 47.5% |
| Fraud Training for Managers/Executives | 51.3% | \$100,000 | \$190,000 | 47.4% |
| Fraud Training for Employees | 51.6% | \$100,000 | \$188,000 | 46.8% |
| Formal Fraud Risk Assessments | 39.3% | \$100,000 | \$187,000 | 46.5% |
| Employee Support Programs | 56.1% | \$100,000 | \$183,000 | 45.4% |
| Anti-Fraud Policy | 49.6% | \$100,000 | \$175,000 | 42.9% |
| Internal Audit Department | 73.7% | \$123,000 | \$215,000 | 42.8% |
| Code of Conduct | 81.1% | \$120,000 | \$200,000 | 40.0% |
| Rewards for Whistleblowers | 12.1% | \$100,000 | \$163,000 | 38.7% |
| Independent Audit Committee | 62.5% | \$114,000 | \$180,000 | 36.7% |
| External Audit of Financial Statements | 81.7% | \$150,000 | \$175,000 | 14.3% |

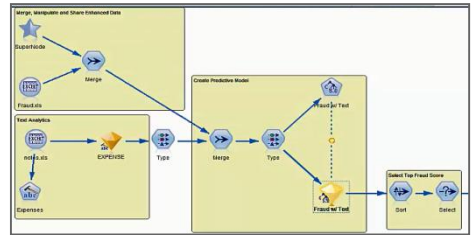
Mapping the COSO Framework to fraud risks



An integrated platform for anti-fraud monitoring and response



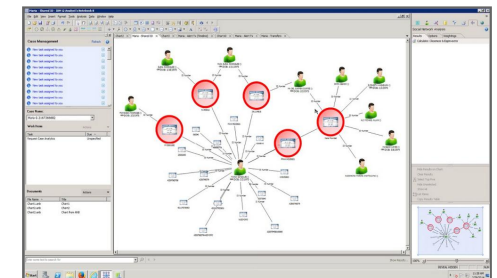
Visualization: Detect fraud risks within a business process, taking a risk-based approach



Statistical: Respond Apply predictive modeling and anomaly detection to surface hidden risks or new patterns

Case Management: Investigate Assign tasks, flag transactions and delegate projects for review

Pattern & Link: Discover Uncover hidden relationship or conflicts of interest



COSO 2013 Internal Controls Framework

Principles 1 through 5

Control Environment

COSO Framework Principles

1. The organization demonstrates a commitment to integrity and ethical values
2. The board of directors demonstrates independence from management and exercises oversight of the development and performance of internal control.
3. Management establishes, with board oversight, structures, reporting lines, and appropriate authorities and responsibilities in the pursuit of objectives.
4. The organization demonstrates a commitment to attract, develop, and retain competent individuals in alignment with objectives.
5. The organization holds individuals accountable for their internal control responsibilities in the pursuit of objectives.

Fraud Risk Management Principles

1. The organization establishes and communicates a fraud risk management program that demonstrates the expectations of the board of directors and senior management and their commitment to high integrity and ethical values regarding managing fraud risk.

Analytic Considerations

- Executive reporting
- Interactive dashboards
- Targeted analysis around metrics, compliance and ratios



COSO Framework Principles 6 through 9

Risk Assessment

COSO Framework Principles

6. The organization specifies objectives with sufficient clarity to enable the identification and assessment of risks relating to objectives.

7. The organization identifies risks to the achievement of its objectives across the entity and analyzes risks as a basis for determining how the risks should be managed.

8. The organization considers the potential for fraud in assessing risks to the achievement of objectives.

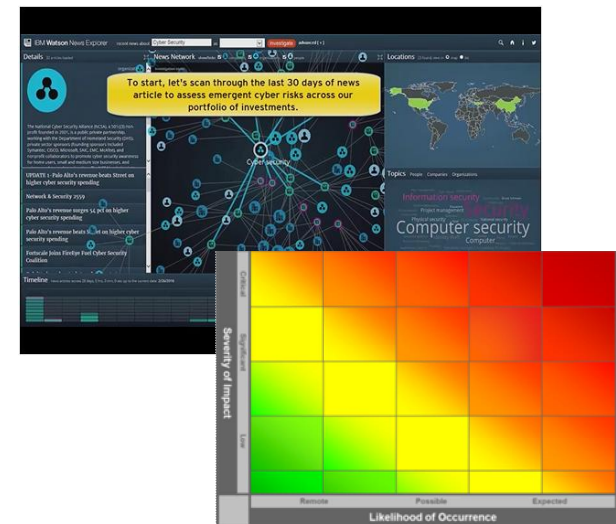
9. The organization identifies and assesses changes that could significantly impact the system of internal control.

Fraud Risk Management Principles

2. The organization performs comprehensive fraud risk assessments to identify specific fraud schemes and risks, assess their likelihood and significance, evaluate existing fraud control activities, and implement actions to mitigate residual fraud risks.

Analytic Considerations

- Surveys & heat maps
- Media scans and external sources such as industry news
- Complaints database



COSO Framework Principles 10 through 12

Control Activities

COSO Framework Principles

10. The organization selects and develops control activities that contribute to the mitigation of risks to the achievement of objectives to acceptable levels.

11. The organization selects and develops general control activities over technology to support the achievement of objectives.

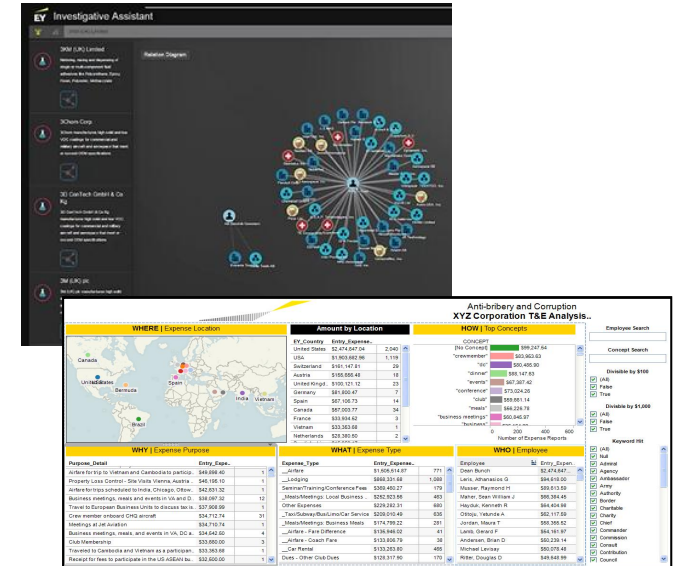
12. The organization deploys control activities through policies that establish what is expected and procedures that put policies into action.

Fraud Risk Management Principles

3. The organization selects, develops, and deploys preventive and detective fraud control activities to mitigate the risk of fraud events occurring or not being detected in a timely manner.

Analytic Considerations

- ABAc analytics
- P2P, O2C, T&E, CRM analysis
- General ledger transaction analysis



COSO Framework Principles 13 through 15

Information & Communication

COSO Framework Principles

13. The organization obtains or generates and uses relevant, quality information to support the functioning of other components of internal control.

14. The organization internally communicates information, including objectives and responsibilities for internal control, necessary to support the functioning of internal control.

15. The organization communicates with external parties regarding matters affecting the functioning of other components of internal control.



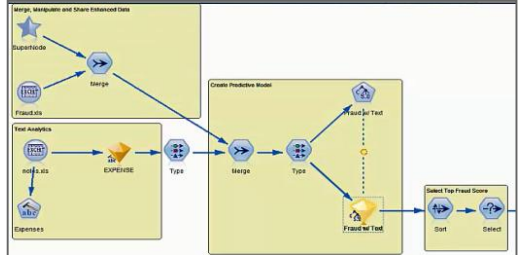
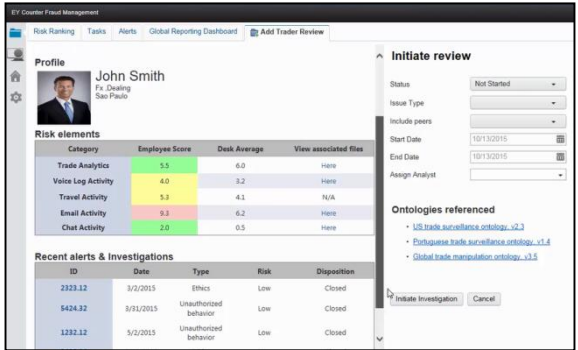
Fraud Risk Management Principles

4. The organization establishes a communication process to obtain information about potential fraud and deploys a coordinated approach to investigation and corrective action to address fraud appropriately and in a timely manner.



Analytic Considerations

- Case management
- Escalation and triage
- Review workflow management



COSO Framework Principles 16 & 17

Monitoring Activities

COSO Framework Principles

16. The organization selects, develops, and performs ongoing and/or separate evaluations to ascertain whether the components of internal control are present and functioning.

17. The organization evaluates and communicates internal control deficiencies in a timely manner to those parties responsible for taking corrective action, including senior management and the board of directors, as appropriate.



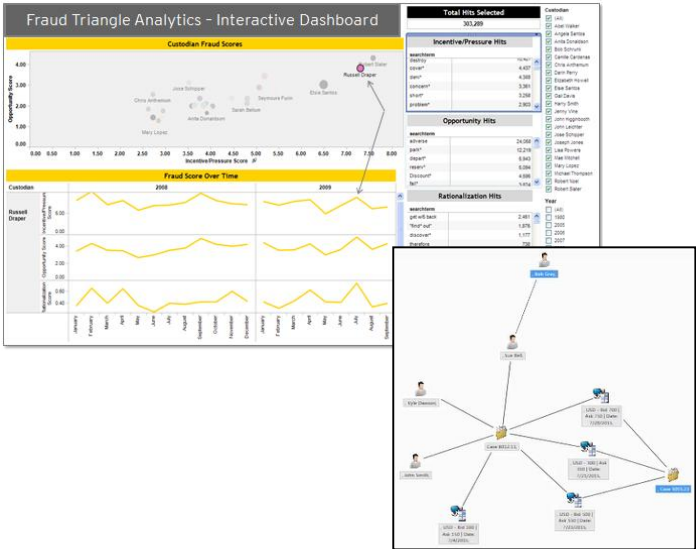
Fraud Risk Management Principles

5. The organization selects, develops, and performs ongoing evaluations to ascertain whether each of the five principles of fraud risk management is present and functioning and communicates fraud risk management program deficiencies in a timely manner to parties responsible for taking corrective action, including senior management and the board of directors.

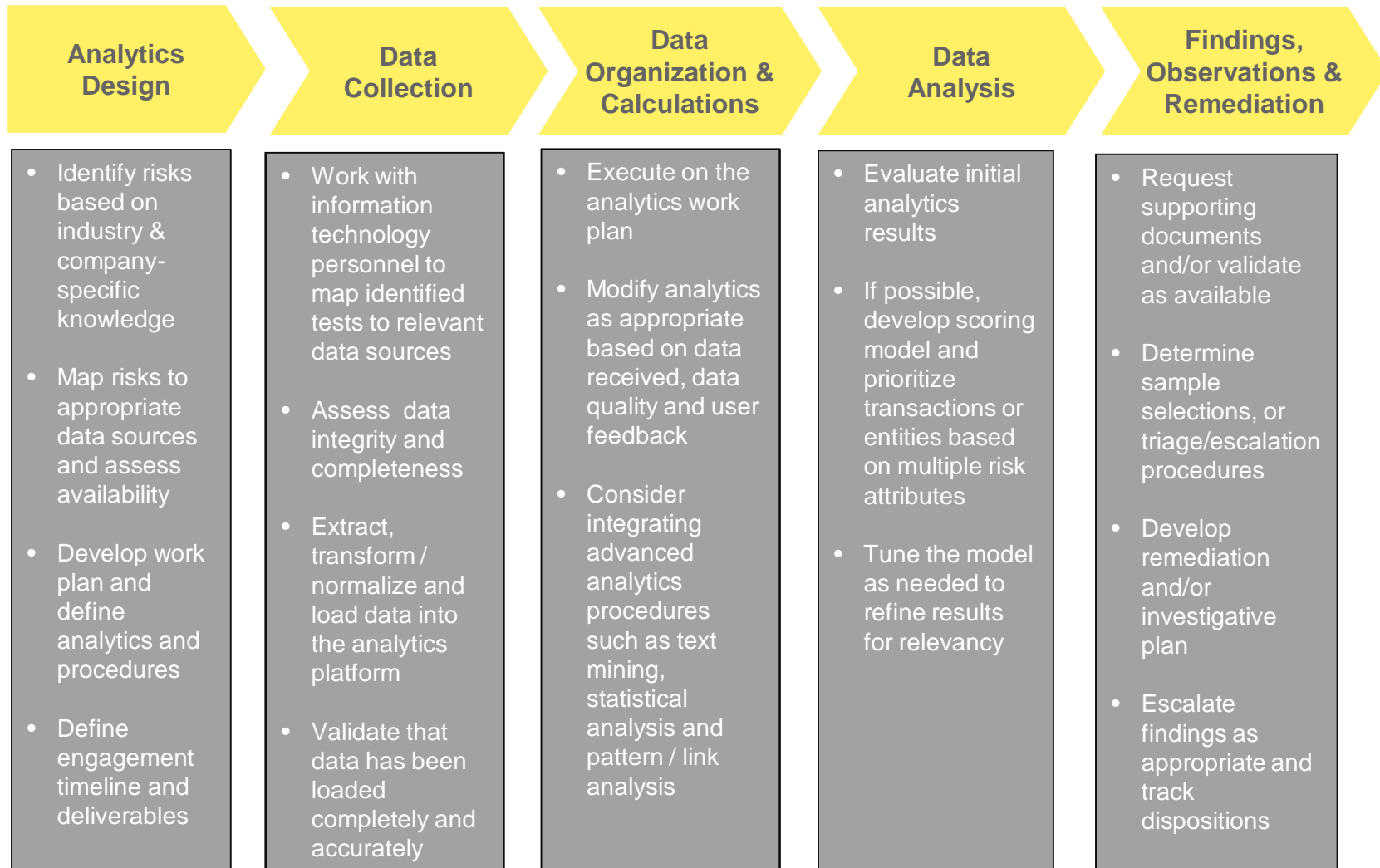


Analytic Considerations

- Investigative procedures
- Deep dive analysis
- Email and communications review



Graphic 1: Forensic Data Analytics Process used in COSO guidance



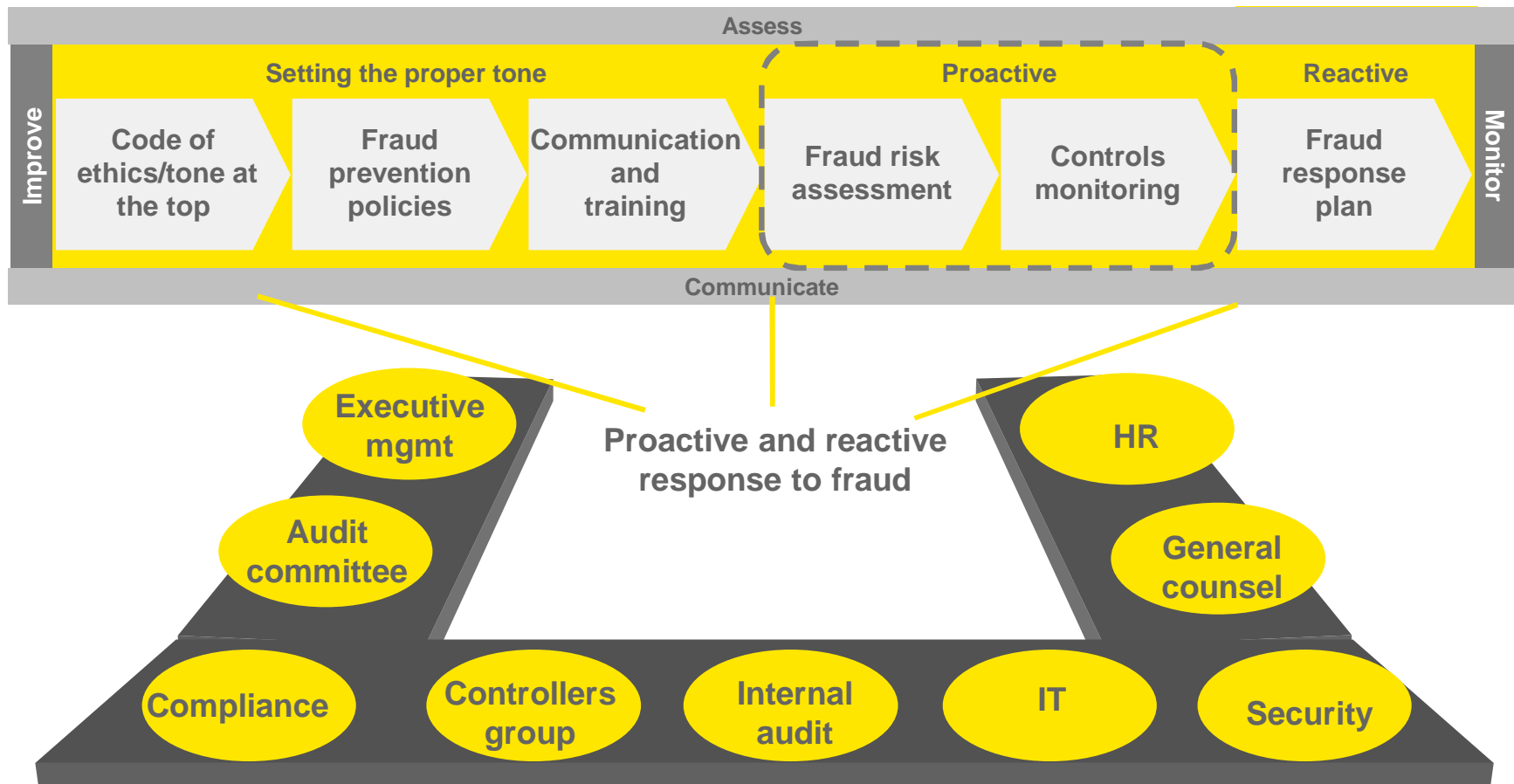
Fraud risk governance



Who owns fraud?

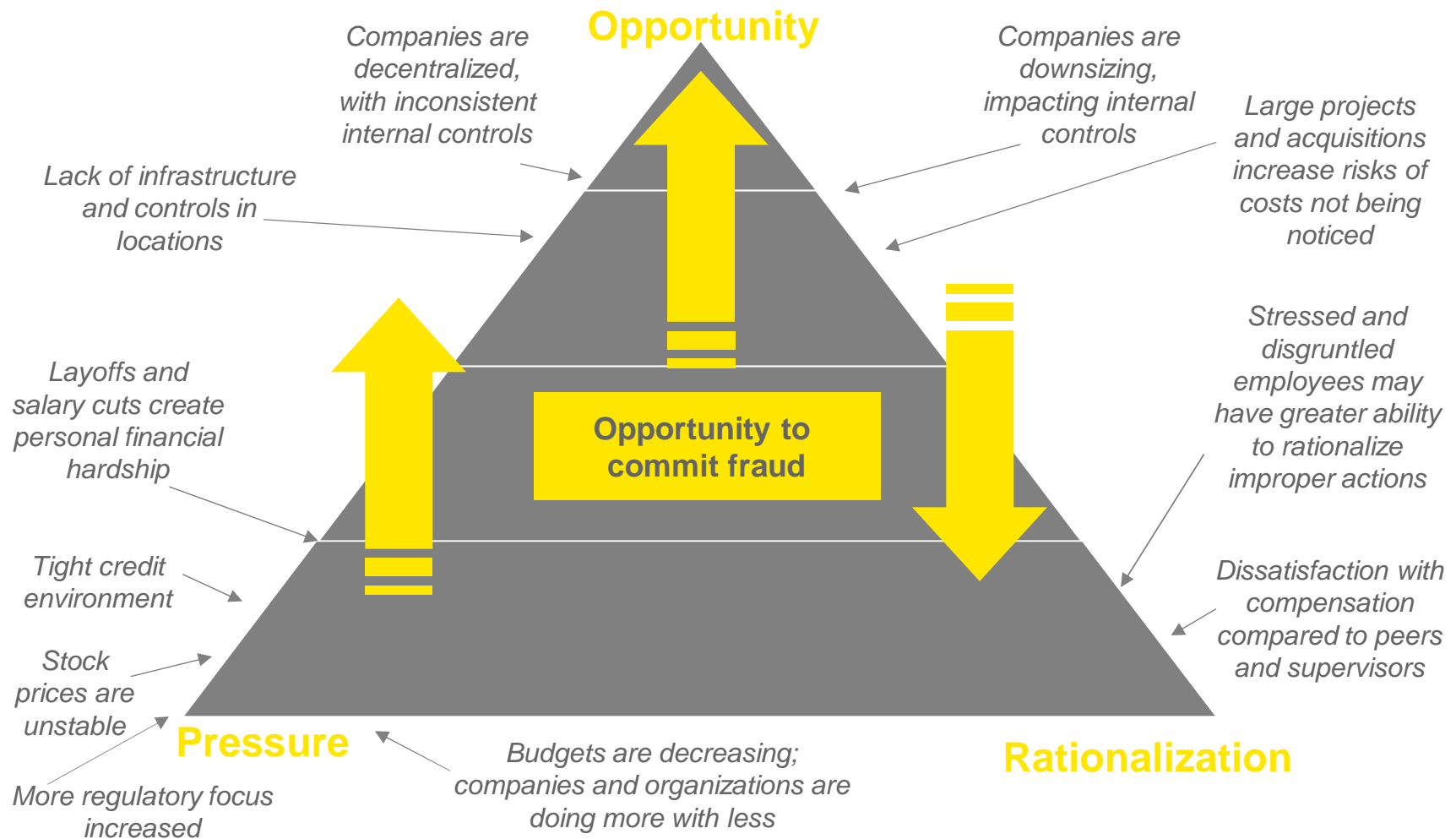
Having a seat at the table from a governance perspective

Companies are creating plans to address fraud proactively and reactively



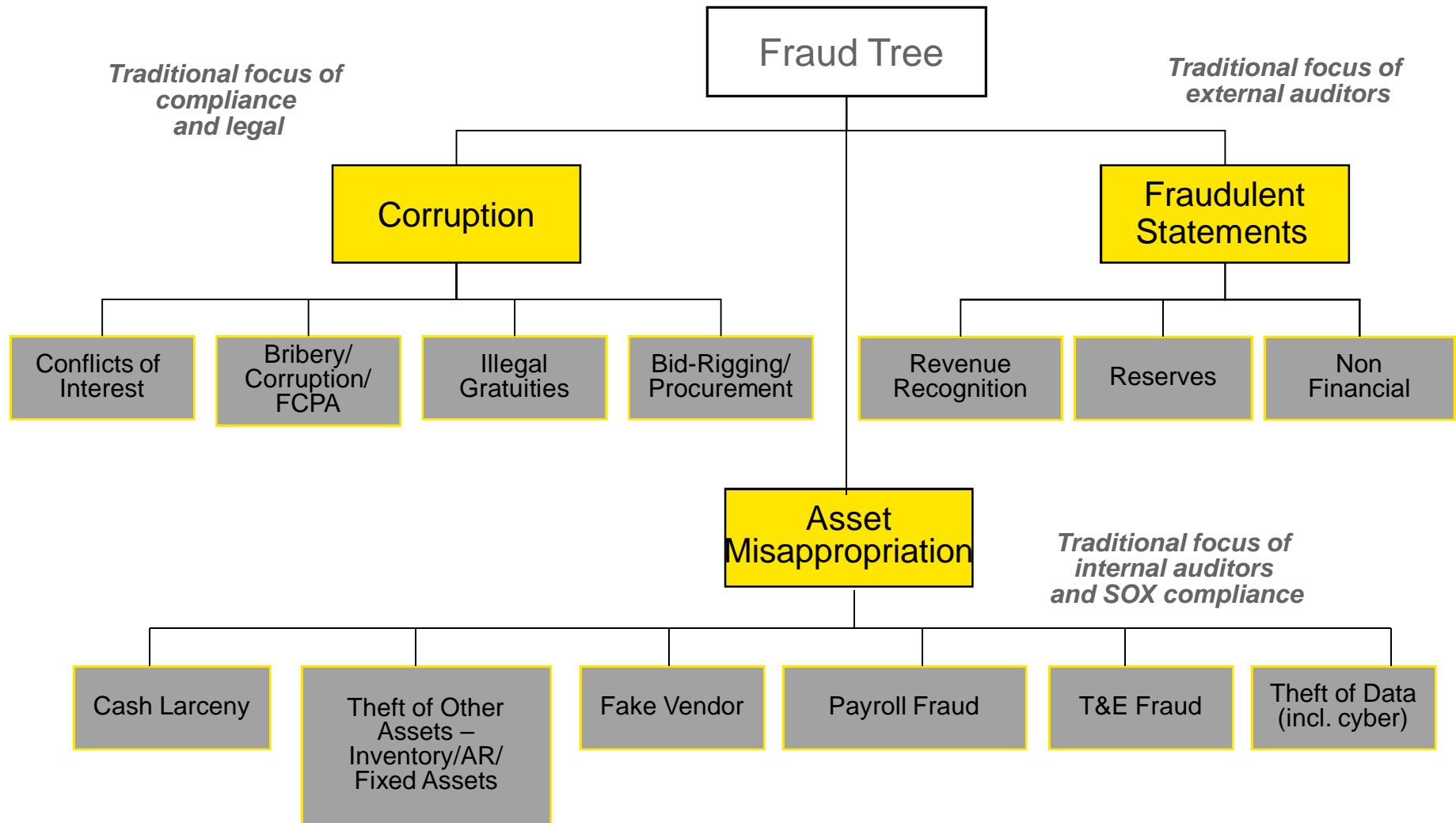
Why people commit fraud: the fraud triangle

Cressey's "fraud triangle"



Fraud tree: Need to consider all three categories

New website coming:



Frequent compliance analytics risk areas, particularly in emerging markets

| | | |
|-------------------------------------|--|--------------------------------------|
| Meals & Entertainment | Marketing & Events | CRM and Sales |
| Information Security/Insider Threat | Employee Payroll | Sales, Distributor & Margin Analysis |
| Vendor Payments / AP | Capital Projects | Accounting Reserves |
| Inventory | 3 rd Party Due Diligence & Watchlist, Shell Companies | Charity & Donations |

Emerging monitoring activities may include...

| | | |
|-------------------------|---------------------------|---------------|
| Social Media Monitoring | Advanced Email Monitoring | Mobil Devices |
|-------------------------|---------------------------|---------------|

Analytics use cases



Big data techniques to counter fraud

- ▶ Multiple data sources – structured and unstructured
- ▶ Data visualization
- ▶ Text analytics
- ▶ Payment/transaction risk scoring
- ▶ Predictive modeling – technology assisted monitoring
- ▶ Case management, issue coding and built in workflow
- ▶ Flexible deployment models

Dashboard examples

Plan and build tests for:

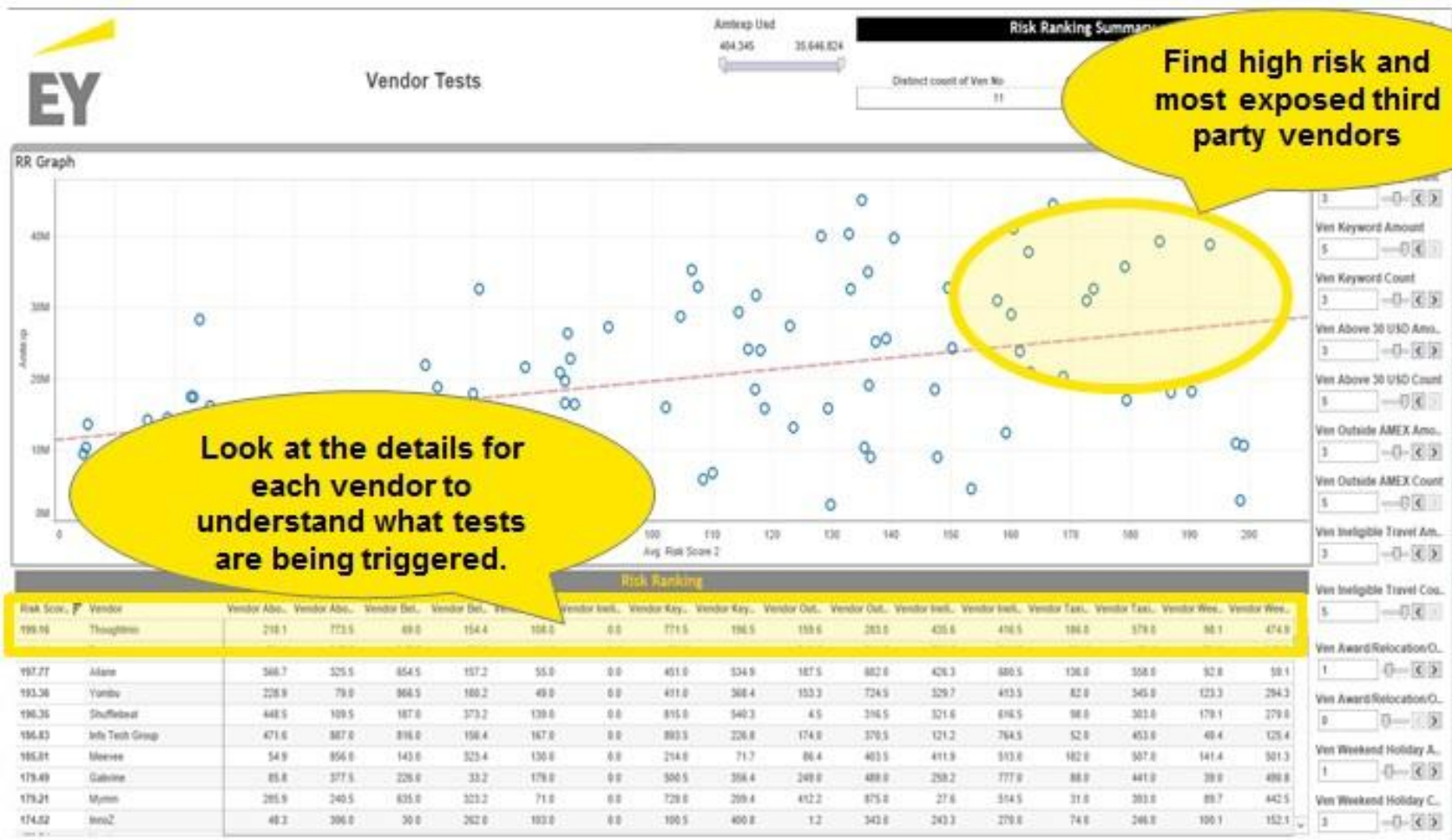
- ü Payment risk scoring
- ü Vendor risk scoring
- ü High risk transactions
- ü Revenue recognition or sales commissions
- ü Conflicts of interests

Additional tests for enhanced reviews:

- ü Inventory management
- ü Salaries & payroll
- ü Employee travel & entertainment
- ü FCPA/UKBA (corruption risks)
- ü Selected compliance topics



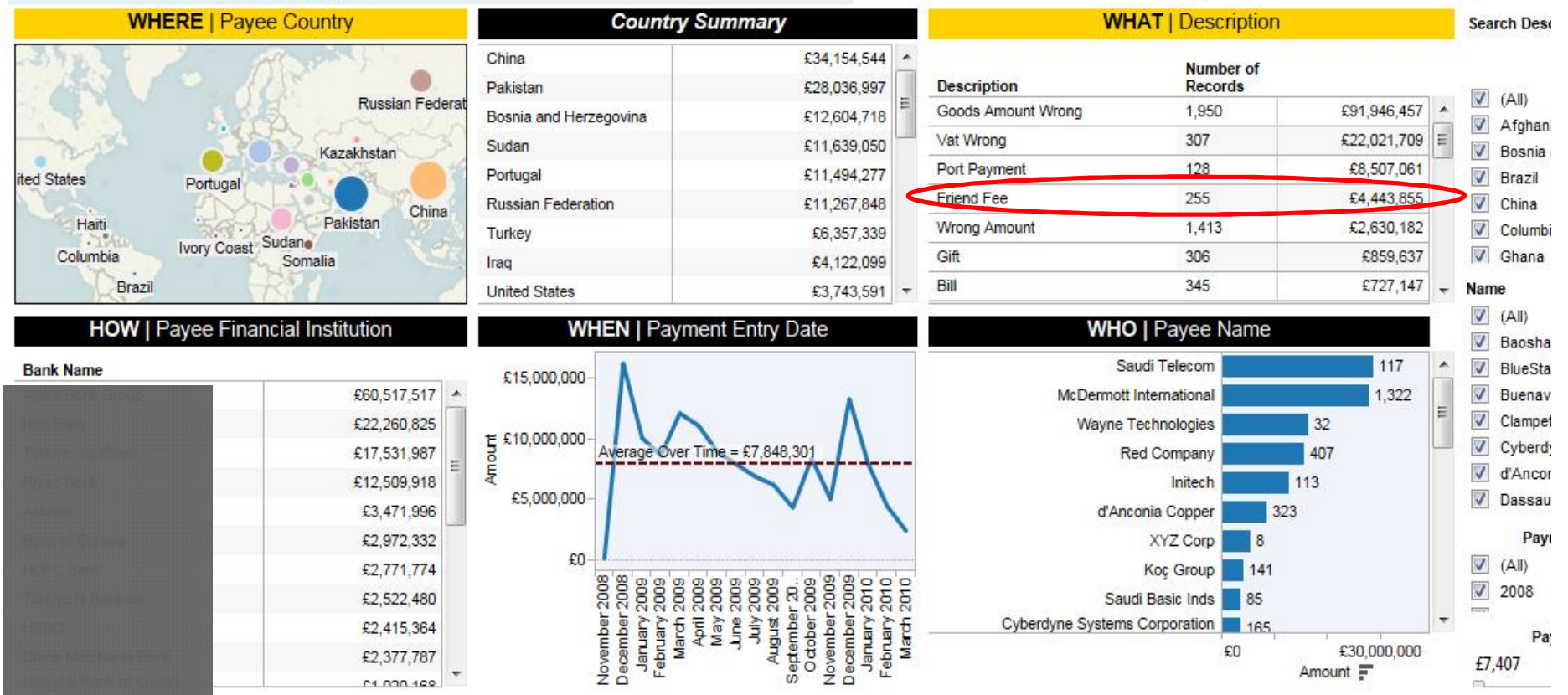
Risk ranking



Data visualization: Accounts payable monitoring

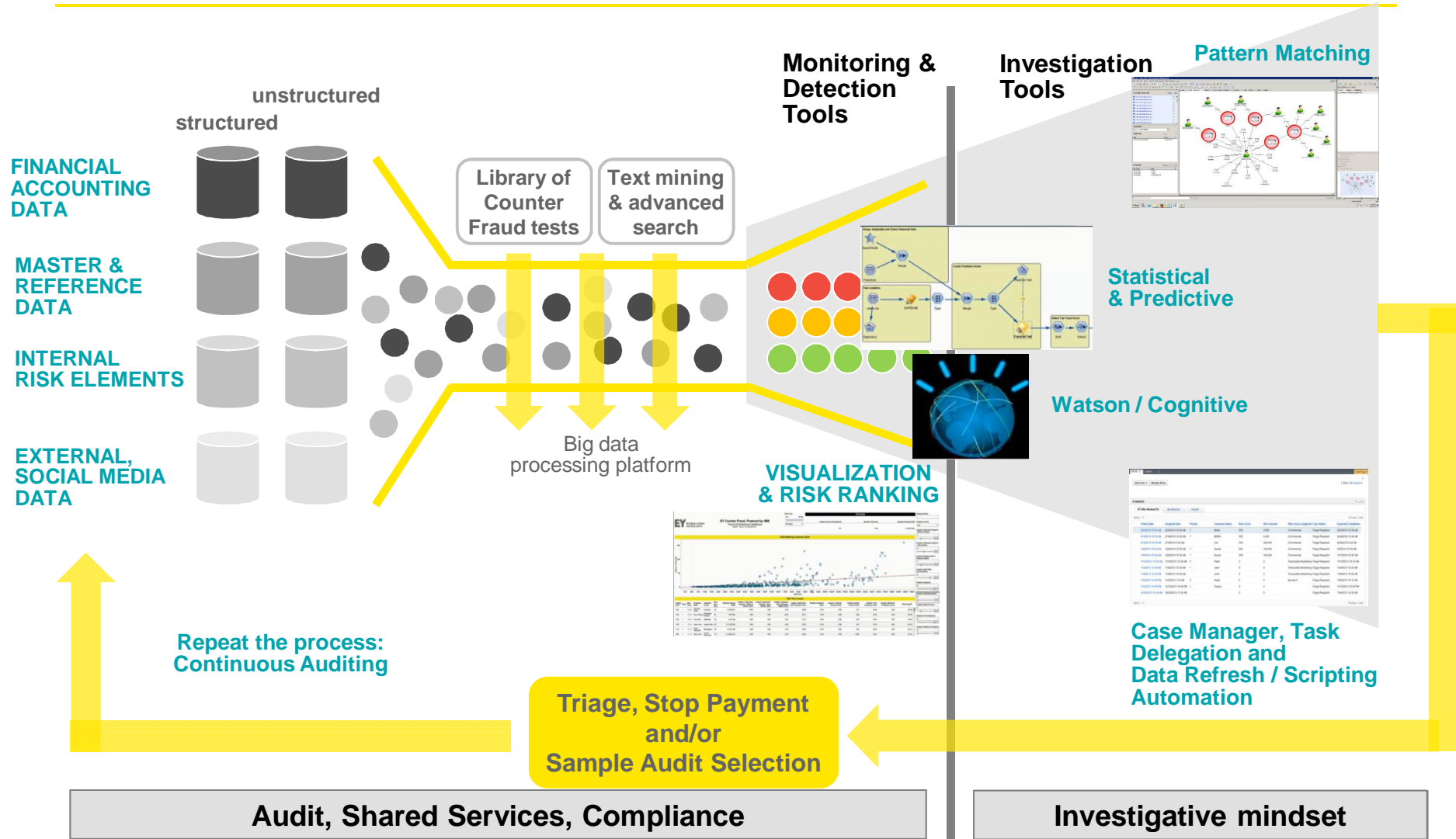
High risk payment descriptions

EY Anti Bribery & Corruption Analytics | XYZ Corp Accounts Payable Stratification Analysis



Forensic data analytics framework

An integrated, platform – from a work flow and monitoring perspective



Current challenge - Legacy surveillance & anti-fraud tools are falling short

- ▶ Legacy surveillance technologies suffer from overreliance on rule-based triggers, ranging from simple if-then statements to basic “keyword” searches on text fields and electronic communications...both of which can be easily circumvented.
- ▶ The approach described above results in increasing volumes of surveillance alerts and false positives, while real threats get buried and go undetected.
- ▶ A tool, in and of itself, will never be effective without the support by the right team with the right skills sets.

Five success factors in deploying forensic data analytics

1. Focus on the low hanging fruit, the priority of the first project matters
2. Go beyond traditional “rules-based” tests – incorporate big data thinking
3. Communicate: share information on early successes across departments / business units to gain broad support
4. Leadership gets it funded, but interpretation of the results by experienced or trained professionals make the program successful
5. Enterprise-wide deployment takes time, don't expect overnight adoption

Thank you

Vincent Walden
Partner, EY Fraud Investigation & Dispute Services
404-817-5717
vincent.walden@ey.com

EY | Assurance | Tax | Transactions | Advisory

About EY

EY is a global leader in assurance, tax, transaction and advisory services. The insights and quality services we deliver help build trust and confidence in the capital markets and in economies the world over. We develop outstanding leaders who team to deliver on our promises to all of our stakeholders. In so doing, we play a critical role in building a better working world for our people, for our clients and for our communities.

EY refers to the global organization, and may refer to one or more, of the member firms of Ernst & Young Global Limited, each of which is a separate legal entity. Ernst & Young Global Limited, a UK company limited by guarantee, does not provide services to clients. For more information about our organization, please visit ey.com.

Ernst & Young LLP is a client-serving member firm of Ernst & Young Global Limited operating in the US.

Ernst & Young LLP, an equal opportunity employer, values the diversity of our work force and the knowledge of our people.

© 2016 Ernst & Young LLP. All Rights Reserved.

SCORE no. XX0000

1603-1886034

ED none

EY is committed to reducing its impact on the environment. This document was printed using recycled paper and vegetable-based ink.

This material has been prepared for general informational purposes only and is not intended to be relied upon as accounting, tax, or other professional advice. Please refer to your advisors for specific advice.

ey.com