



ADVISORY

# What is Driving Continuous Auditing / Continuous Monitoring (CA/CM) Today?

KPMG LLP

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# Background

# Background

- ◆ In the current complex business environment, there is an increased focus on adopting innovative ways of assessing and managing risk while enhancing performance through internal audit
- ◆ Advances in technology have paved the way for increased use of CA/CM on organizational processes, transactions, systems, and controls
- ◆ Organizations are leveraging technologies to change how they evaluate the effectiveness of controls and monitor performance
- ◆ CA/CM provides deeper insight into areas of risk and opportunity, while strengthening governance structures

# CA/CM Overview

## *Definitions and Objectives*

### Continuous Auditing

“The collection of audit evidence and indicators, by an internal or external auditor, on IT systems, processes, transactions and controls on a frequent or continuous basis throughout a period”

- ◆ Gain audit evidence more effectively and efficiently
- ◆ React more timely to business risks
- ◆ Leverage technology to perform more efficient internal audits
- ◆ Focus audits more specifically
- ◆ Help monitor compliance with policies, procedures, and regulations
- ◆ Become more valuable to the business

### Continuous Monitoring

“An automated feedback mechanism used by management to help ensure that systems and controls operate as designed and transactions are processed as prescribed”

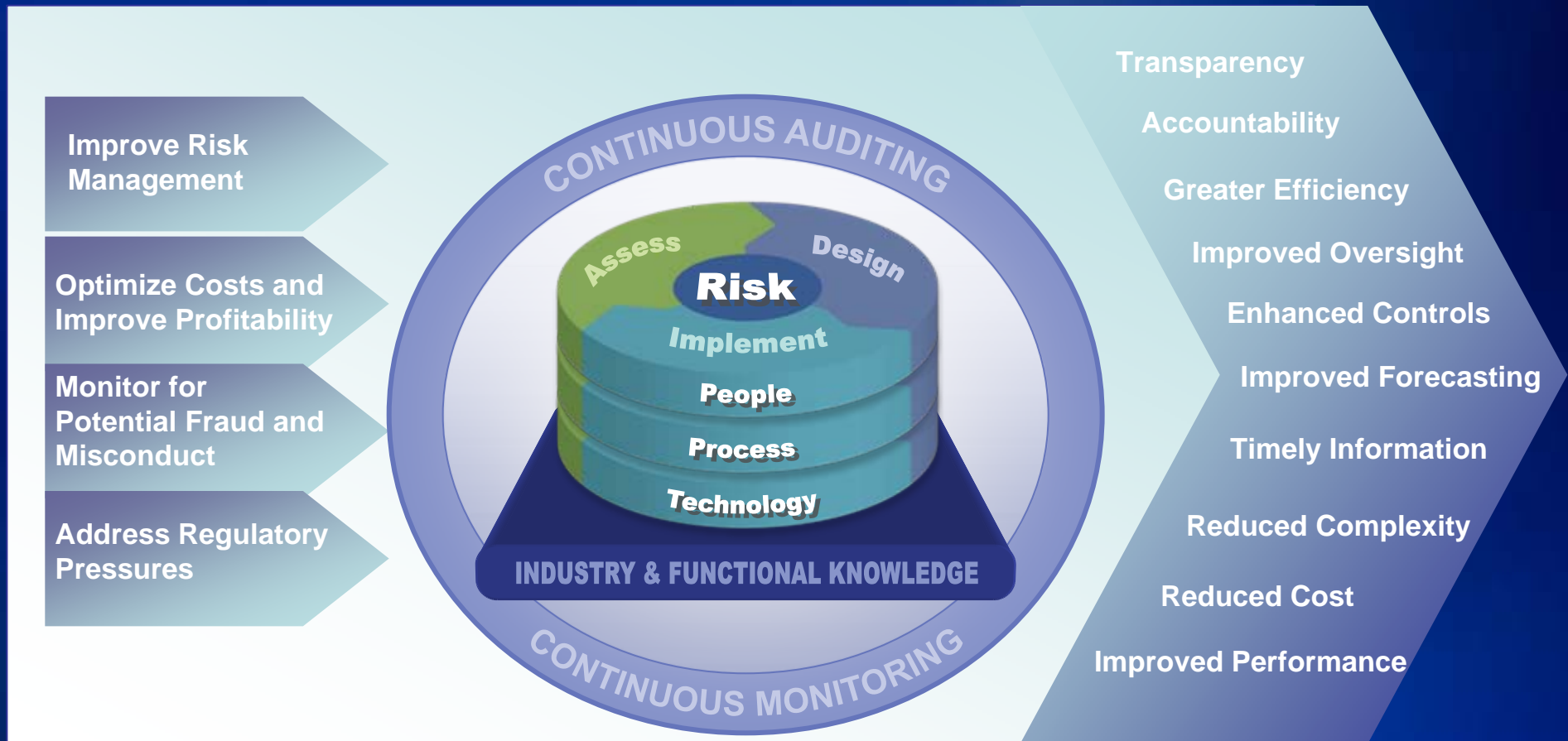
- ◆ Improved governance
- ◆ Increase visibility into operations
- ◆ Obtain better information for day-to-day decision making
- ◆ Strive to reduce cost of controls
- ◆ Leverage technology to create efficiencies

# Drivers of CA/CM

# Drivers and Benefits of CA/CM

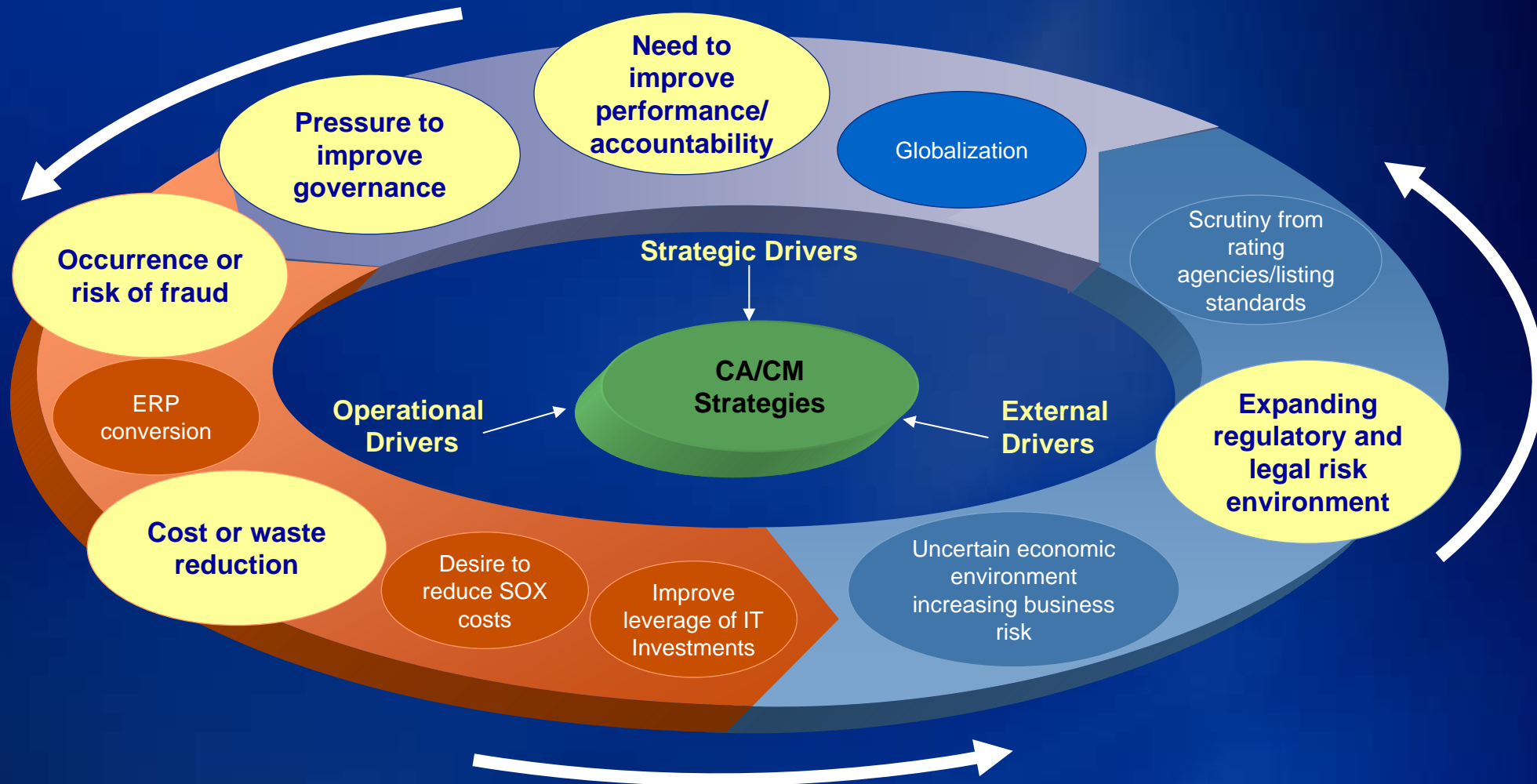
- ◆ A number of drivers influence investment decisions to implement and refine an organization's CA/CM capability which benefits the organization in various ways.

## Economic Drivers and Benefits of Implementing CA/CM Capabilities



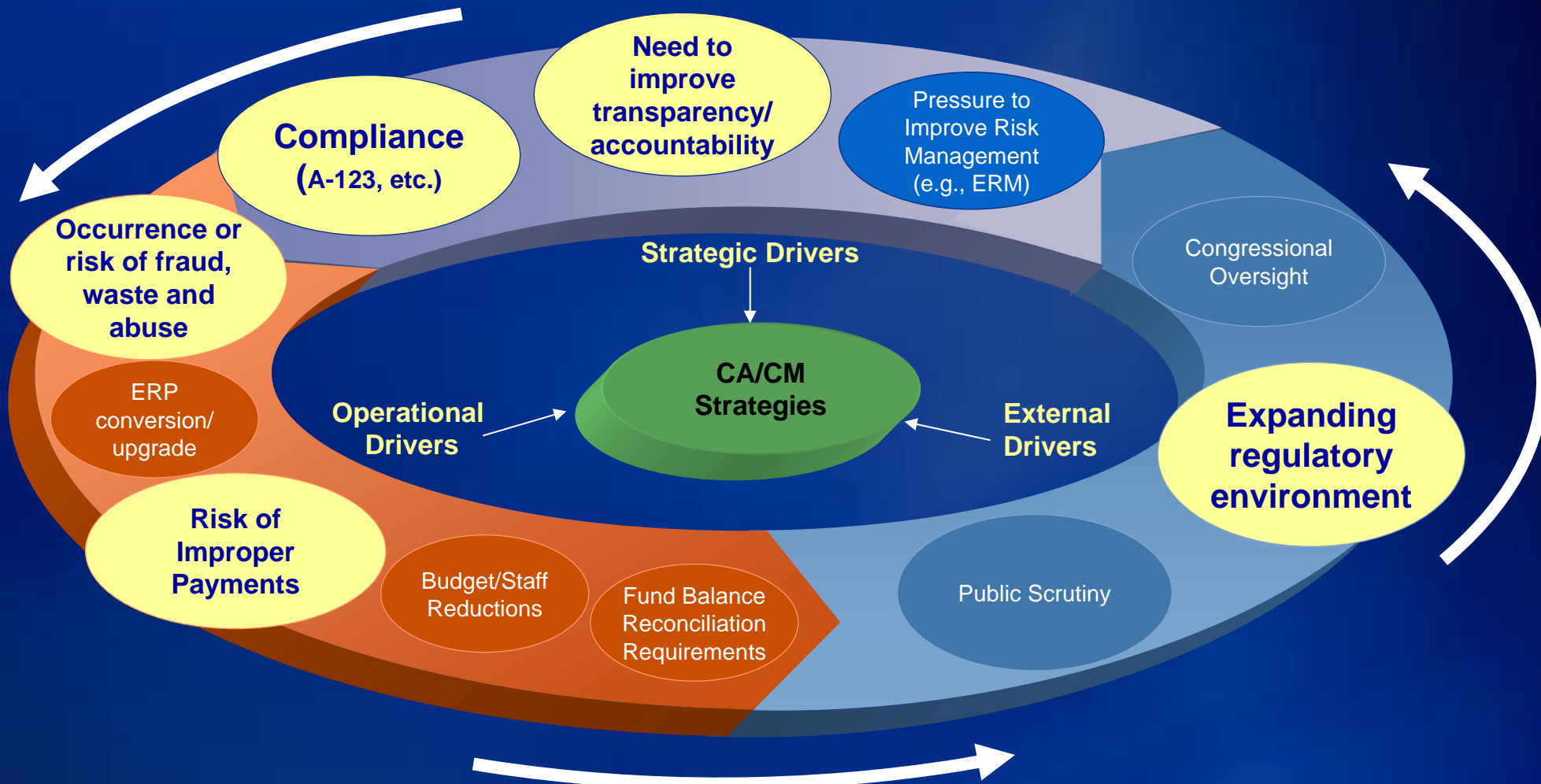
# Understanding the Drivers (Private Sector)

*The business case for implementing CA/CM varies with each organization and depends on numerous business drivers*



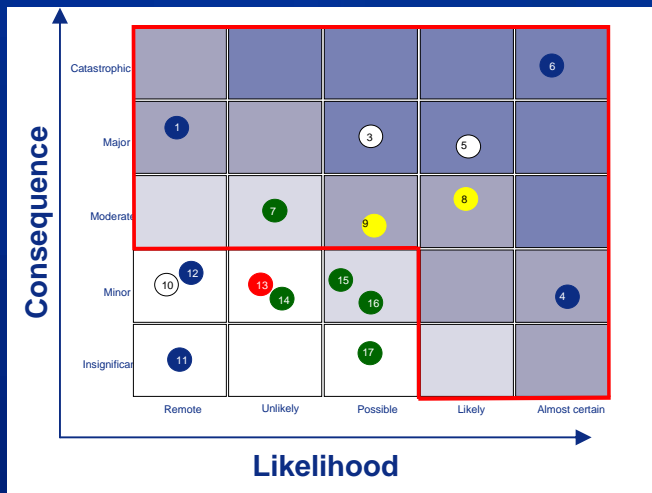
# Understanding the Drivers (Public Sector)

*The business case for implementing CA/CM varies with each agency and depends on numerous drivers*



# Current CA/CM Trends

## Enterprise Risk Management - Using CM to Monitor Risks on a Continuous Basis



KPMG ERM Framework	
Framework Element	Description
Risk Governance	Establishment of approach for developing, supporting, and embedding the risk strategy and accountabilities
Risk Assessment	Identifying, assessing, and categorizing risks across the enterprise
Risk Quantification & Aggregation	Measurement, analysis, and consolidation of enterprise risks
Risk Monitoring & Reporting	Reporting, monitoring, and assurance activities to provide insights into risk management strengths and weaknesses
Risk & Control Optimization	Using risk and control information to improve performance

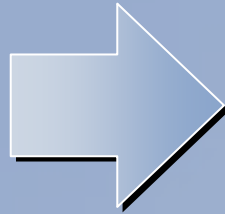


# **Internal Audit's Use of Continuous Auditing**

# Evolving Role of Internal Audit in the Current Environment

## “Historical”

- Cyclical-based auditing
- Focus on coverage of audit universe
- Sampling small percentage of population
- End-to-end audits of processes/business units
- Limited data mining on audits



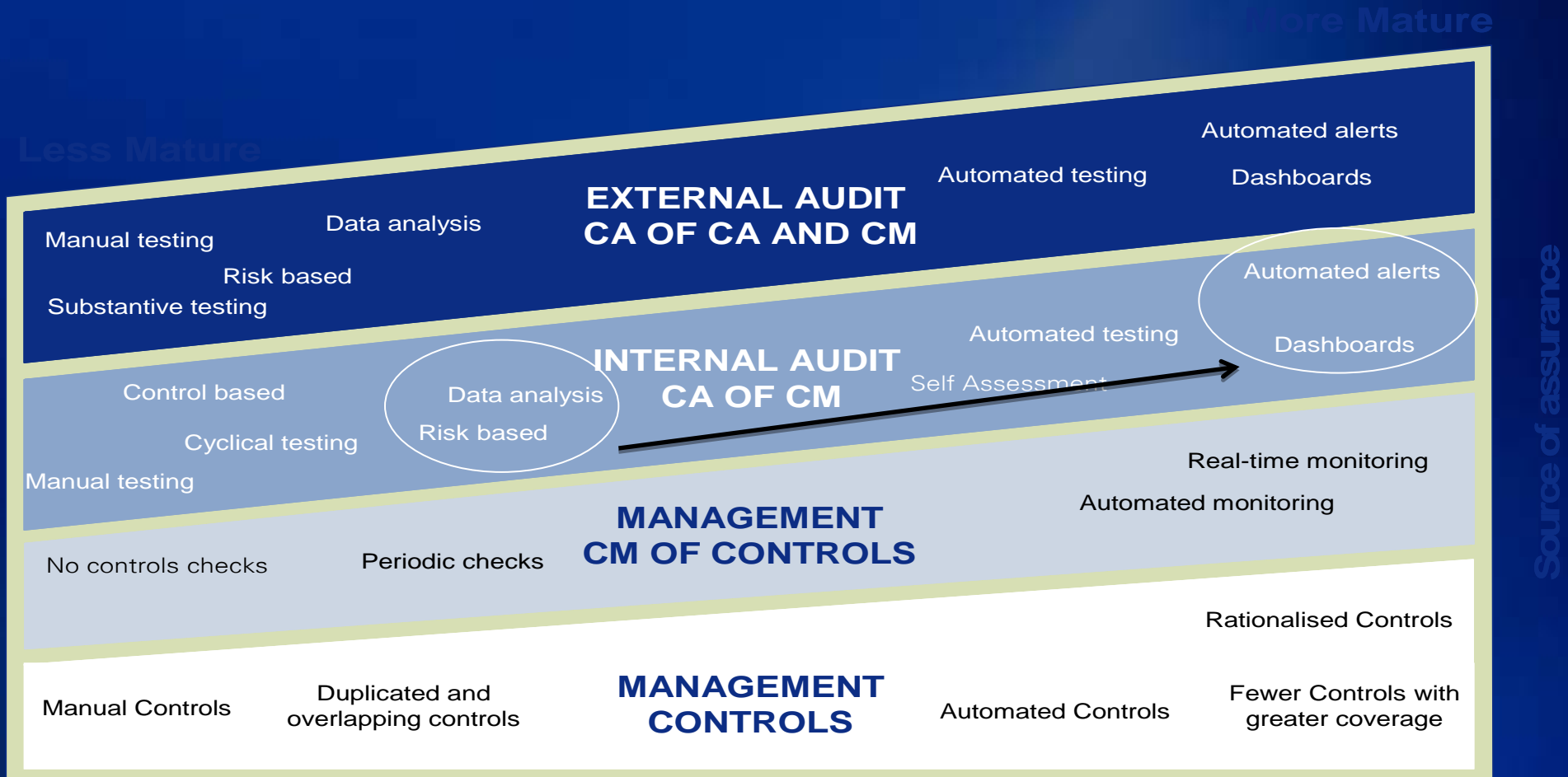
## “Current”

- Risk-based data gathering
- Fraud detection emphasis
- “Pressure to be lean” - more focused audits based on identified triggers
- Dynamic audit planning
- Efficient analysis of a larger population
- Balance of controls vs. transaction monitoring based on underlying risk
- Evolving skills set

# Internal Audit's Use of Continuous Auditing

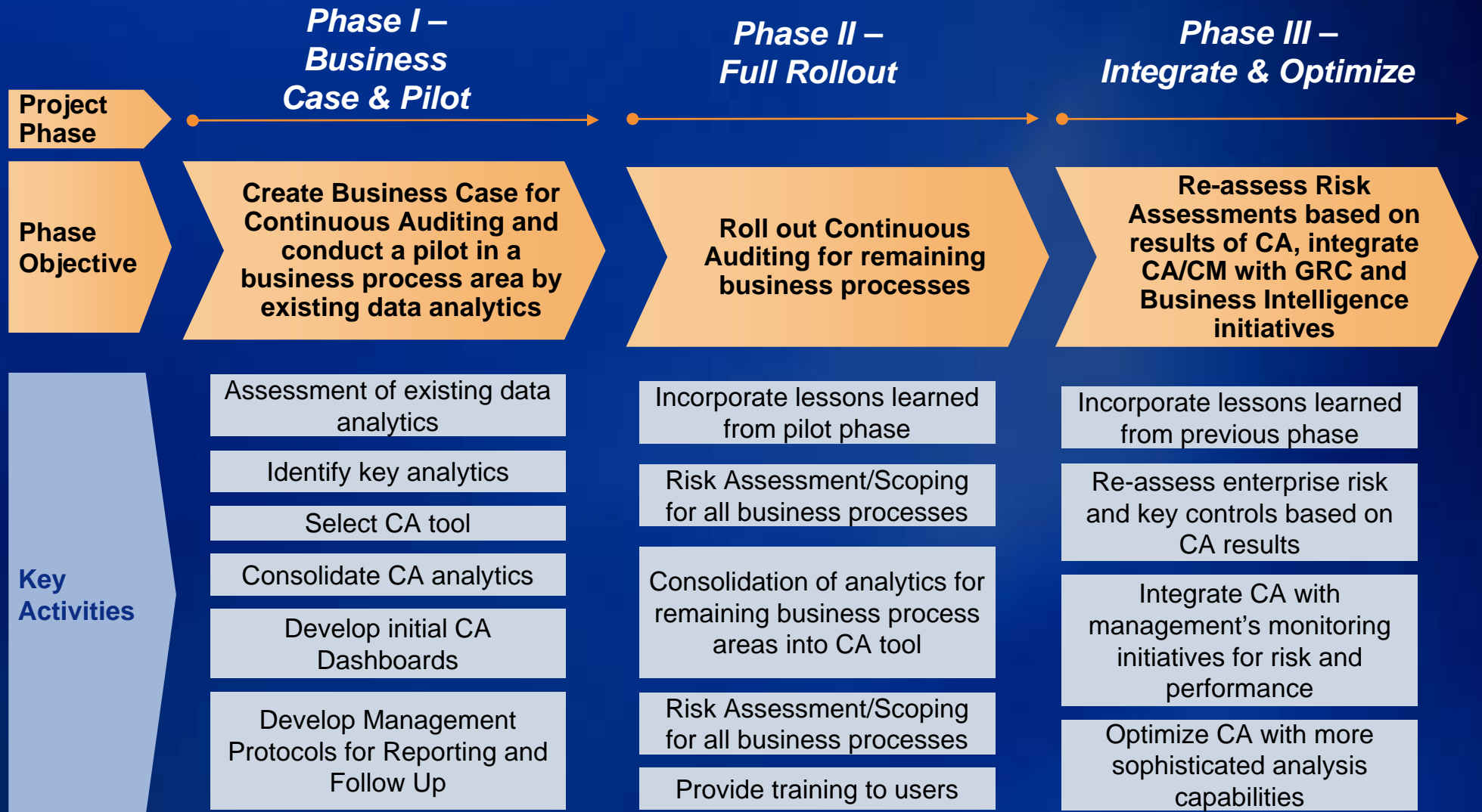
## Internal Audit Capability – Current and Potential Future State

This pragmatic approach leverages the existing investment Internal Audit has made in Data Mining from audit-by-audit data analytics toward the dashboards and automated alerts that provide real time risk insights to Internal Audit.



# Internal Audit's Use of Continuous Auditing

## Example CA Implementation Roadmap – 3 Phased Deployment Approach for Internal Audit



# **Phase I – Building a Business Case for CA/CM**

# Building A Business Case for CA/CM

## Developing a Strategy

- ◆ In building a business case for CA or CM, it is important to identify the underlying sets of risk that are currently not monitored or monitored too infrequently, thereby creating undesirable corporate exposure
- ◆ A CA or CM implementation can be successful regardless of whether management or internal audit takes the first step
- ◆ Efforts to align business objectives and risks for both stakeholders can allow for quick initial wins that build momentum
- ◆ Visualizing the potential for use of CA or CM within an organization is both useful and important, as it can assist management with determining key milestones toward the desired outcome

# Building A Business Case for CA/CM

## *Developing a Strategy – Considering the Dimensions of CA/CM*

### Macro-Analytic Dimension

Macro-Level Analysis for trends, patterns, results (e.g., DSO, DPO, working capital requirements, etc.)

**Risk/  
Performance**

Controls  
Dimension

Financial Controls Management, SOD, etc.

Transaction-based exception analysis and business rule management

Transactions  
Dimension

***Risk and Performance Monitoring is optimized when all three dimensions are implemented***

# Building A Business Case for CA/CM

## *Developing a Strategy*

- ◆ **Introduce the concept to relevant stakeholders**
  - Consider “one enterprise dollar” concept if possible
  - Can/should involve both management and internal audit
- ◆ **Start with a basic transaction process (full or pilot):**
  - Disbursement- or revenue-related processes
  - Discrete process
  - Recognized need (risk- and/or performance-based)
  - Quick/easy win, low risk to stakeholders, easily documented ROI
    - Project capable of quick implementation with measurable results
  - Manage the people and process components, as well as the technology component
- ◆ **Address change management challenges**
- ◆ **Demonstrate results to stakeholders and seek their support to extend initiative to other processes**

# Building A Business Case for CA/CM

## *Objectives and Scope of the CA/CM Effort*

- ◆ **What are the objectives?**
  - CA for Internal Audit, CM for Management, or both
  - Automate controls and/or business process components
  - Strengthen Internal Audit data analytics
- ◆ **What are the anticipated areas of focus?**
  - ERP? Non-ERP? Both?
  - Controls, transactions, macro analysis
  - Risk types? (e.g., fraud, performance, waste, regulatory compliance)
- ◆ **How will the analysis be performed?**
  - Embedded, extracted
  - Frequency: regular, repeatable, near real-time
- ◆ **Required sophistication of analytic functionality**
  - Rules, statistical, temporal, artificial intelligence
- ◆ **Cost**

# **Building A Business Case for CA/CM**

## ***Objectives and Scope of the CA/CM Effort***

- ◆ **Exception handling**
  - Alerts
  - Aggregation, prioritization, scoring
  - Assignment, investigation, resolution, documentation
- ◆ **Reporting and dashboard capabilities**
- ◆ **Technical considerations**
  - Impact on system performance (extraction)
  - Infrastructure limitations
  - Availability of data and number of sources
  - Experience of IT personnel
- ◆ **Required speed of analysis and hardware requirements (e.g. daily analytics)**
- ◆ **End User Requirements**
  - Transaction monitoring
  - Control and configuration monitoring
  - Case management/remediation tracking
  - Master data monitoring

# **Building A Business Case for CA/CM**

## ***Pilot Process – Creating Objectives for a Pilot***

### **1. Risk Assessment**

- Process steps
- Exception types
- Entities (users, customers, accounts, etc.)

### **2. Evidence**

- Failed transactions
- Valid transactions

### **3. Trends**

- Entity relationship trends
- Process trends

### **4. Process Improvement**

# Building A Business Case for CA/CM

## *Sample Pilot Objectives – Purchase to Pay Process – Direct Financial Value Add*

- ◆ **Collection of duplicate payments**
- ◆ **Prevention of future duplicate payments**
- ◆ **Streamline payment process (e.g., one payment per month versus many smaller payments within a month)**
- ◆ **Realize unused vendor credits (e.g., for returns)**
- ◆ **Paying vendors according to terms (e.g., impact to cash/working capital by paying a vendor before they are due)**
- ◆ **Reduction in late fee penalties for poorly managed payment process (depends on business)**
- ◆ **Consolidation of supply chain across the organization (e.g., 10 divisions individually buying from one supplier versus organizational purchasing and negotiation of better pricing and terms)**
- ◆ **Optimization of purchasing/deliveries to reduce freight in costs (e.g., making less frequent larger purchases versus frequent small purchases)**
- ◆ **Depending on the industry, there may be other industry-specific opportunities (e.g., legal spend issues)**

# Building A Business Case for CA/CM

## *Sample Pilot Objectives – Purchase to Pay Process – Indirect Financial Value Add*

- ◆ Behavioral change by vendors and buyers (e.g., better adherence to terms and conditions by vendors and employees)
- ◆ Automate previous manual business processes reducing errors and freeing up resources for other activities (i.e., do more with less)
- ◆ Automated controls where G/L or ERP can't support
- ◆ Better intelligence of procurement (e.g., category spend analysis)
- ◆ Risk-based profiling of activity
- ◆ Help manage regulatory non-compliance risk (e.g., FCPA, USA Patriot Act)
- ◆ More efficient root cause analysis

# **Practical Application – Considering Complexity of Risk and Performance**

# Practical Application – Complexity of Risk/Performance

## *Levels of Risk in Application*

### Complexity of Risk/Performance Business Application

#### Low

- Errors, waste, policy violations
- Disbursement Areas
  - AP, P-Card, T&E
  - Payroll
- Revenue Areas
  - A/R
  - Credit & Billing

#### Medium

- Fraud & Misconduct, Abuse
  - Procurement Fraud
  - Asset misappropriation
  - Earnings Management

#### High

- Regulatory Non-Compliance
  - FCPA
  - OFAC
  - US Patriot Act
  - Other Regulatory

# **Practical Application – Complexity of Risk/Performance**

## ***The Drive to Reduce Costs – Performance Based & Risk Based***

- ◆ **Potential savings related to performance-based areas**
  - Improved working capital (e.g., DSO, DPO) and cash flow
  - Reduced costs associated with fraud, waste and abuse
  - Reduced costs associated with reduction of errors and costs of related research and re-work activities
  - Reduced costs of compliance with regulations and policies
  
- ◆ **Potential savings related to risk-based activities**
  - Reduction in full time equivalents or reallocation of resources focusing on significant risks
  - Potential to reduce SOX/FMFIA compliance costs
  - Increased detection and prevention of fraud and misconduct and reduction in the number of incidents
  - Increase audit coverage and reduce time required to audit

# Practical Application – Complexity of Risk/Performance

## *Levels of Risk in Application – Lower Risk (Fraud, Waste, & Abuse)*

	<b>Manual Journal Entries</b>	<b>Procurement</b>
<b>Fraud</b>	<ul style="list-style-type: none"> <li>• Earnings management</li> <li>• Improper management override</li> <li>• Improper expense capitalization</li> </ul>	<ul style="list-style-type: none"> <li>• Fictitious Vendors</li> <li>• Fictitious/inflated invoices</li> <li>• Duplicative purchases (e.g., P-Card)</li> <li>• Improper P-Card purchases</li> </ul>
<b>Waste</b>	<ul style="list-style-type: none"> <li>• Processed incorrectly</li> <li>• Not booked on a timely basis or supported</li> </ul>	<ul style="list-style-type: none"> <li>• Duplicate payments</li> <li>• Erroneous overpayments</li> <li>• Payments inconsistent with terms</li> </ul>
<b>Abuse</b>	<ul style="list-style-type: none"> <li>• Excessive management override</li> <li>• User ID abuse</li> </ul>	<ul style="list-style-type: none"> <li>• Structured payments</li> <li>• Unauthorized/unapproved purchases</li> <li>• Conflicts of interest</li> </ul>

# Practical Application – Complexity of Risk/Performance

## *Levels of Risk in Application – Lower Risk (Fraud, Waste, & Abuse)*

	<b>T&amp;E</b>	<b>Payroll</b>
<b>Fraud</b>	<ul style="list-style-type: none"> <li>• False/inflated reimbursement requests</li> <li>• Purchases for personal use</li> <li>• Duplicate purchasing and reimbursement schemes</li> </ul>	<ul style="list-style-type: none"> <li>• Ghost employees</li> <li>• Inflated salaries</li> <li>• Inflated hours</li> <li>• Improper supplemental payments</li> <li>• Improper incentive compensation</li> </ul>
<b>Waste</b>	<ul style="list-style-type: none"> <li>• Non-preferred vendors</li> <li>• Duplicate payments</li> <li>• Credits not applied</li> </ul>	<ul style="list-style-type: none"> <li>• Errors in salaries and pay rates</li> <li>• Staff utilization and unnecessary overtime</li> </ul>
<b>Abuse</b>	<ul style="list-style-type: none"> <li>• Unauthorized vendors</li> <li>• Unauthorized expenditures</li> <li>• Excessive spending</li> </ul>	<ul style="list-style-type: none"> <li>• Excessive overtime</li> <li>• Excessive supplemental payments, bonuses, incentive compensation</li> </ul>

# **Practical Application – Complexity of Risk/Performance**

## ***Levels of Risk in Application – Higher Risk (Regulatory)***

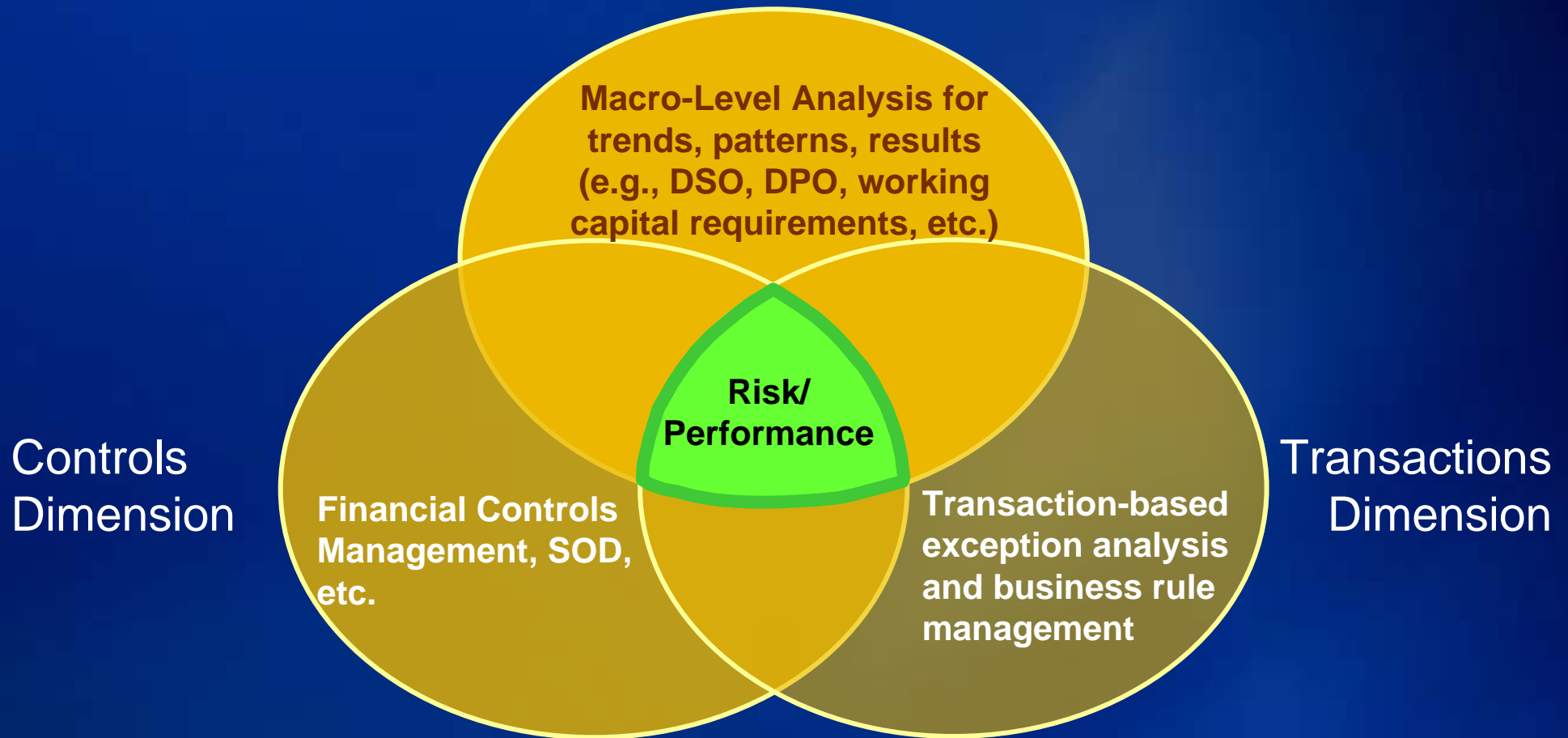
- ◆ **Foreign Corrupt Practices Act (FCPA)**
- ◆ **Office of Foreign Assets Control (OFAC)**
- ◆ **USA Patriot Act**
  - Money Laundering
- ◆ **Deficit Reduction Act (Public Sector)**
- ◆ **Federal Managers Financial Integrity Act (Public Sector)**
- ◆ **Improper Payments Information Act (Public Sector)**
- ◆ **Industry Specific (e.g., State reporting laws relating to pharmaceutical manufacturers and payments to healthcare professionals)**

# Enabling with Technology

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## Considering the Dimensions of CA/CM

### Macro-Analytic Dimension



***Risk and Performance Monitoring is optimized when all three dimensions are implemented***

# Enabling with Technology

## Considerations

### Types of Technology Tools (Evolving)

#### ◆ Continuous Control Monitoring

- Application configuration parameters
- User access and segregation of duty analysis
- Examples of available tools

#### ◆ Continuous Transaction Monitoring

- Transaction attribute analysis
- Transaction pattern analysis
- Examples of available tools

### Technology Selection Considerations

#### ◆ Technical

- Infrastructure limitations
- Availability of data and number of sources
- Level of sophistication of IT personnel

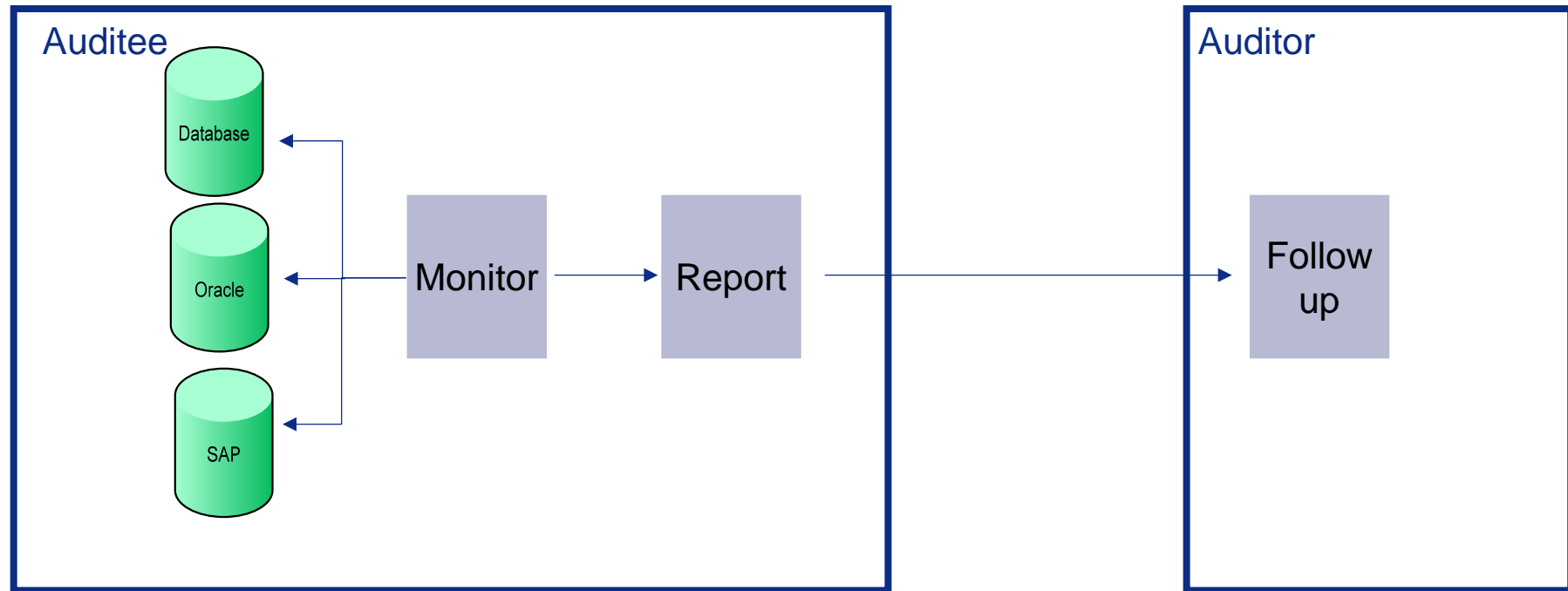
#### ◆ End-User Requirements

- Transaction monitoring
- Control and configuration monitoring
- Case management/remediation tracking
- Master data monitoring

# Enabling with Technology

## *Two Main Technology Types*

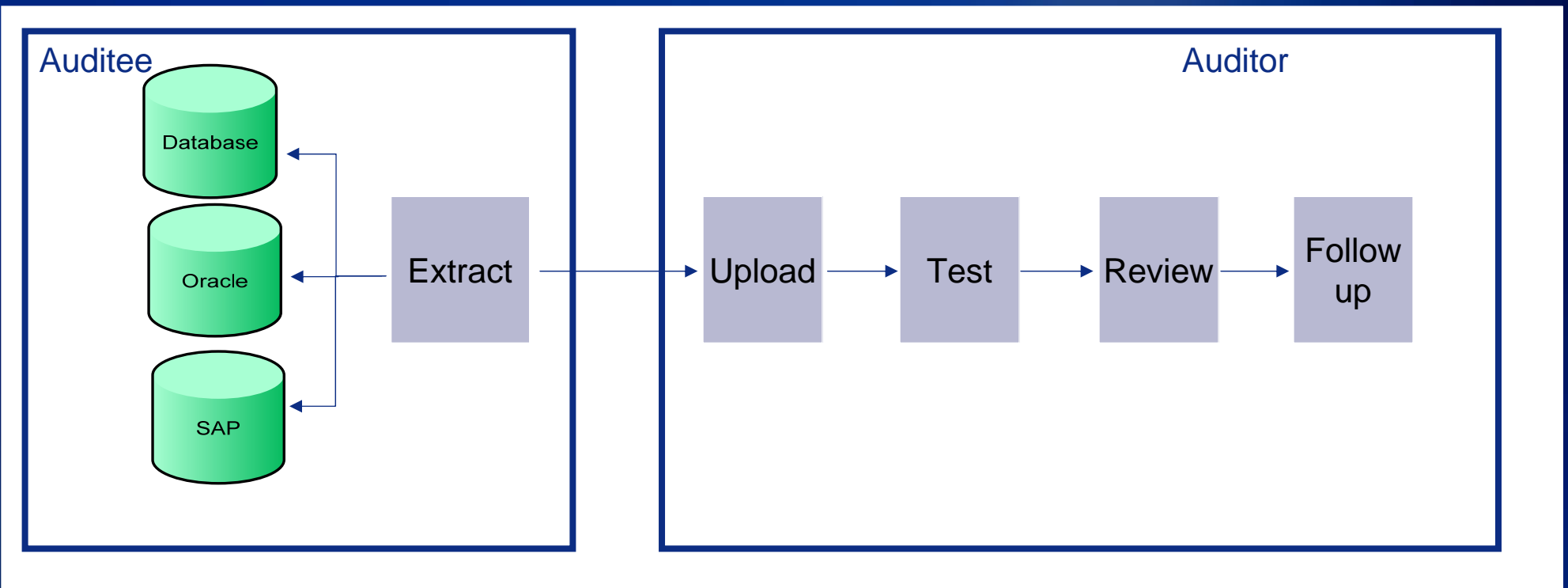
- ◆ **Type 1** – Embedded Monitor at Source
- ◆ Examples : SAP and Oracle GRCs, Approva, Oversight, Xalerts, EAMs, Others



# Enabling with Technology

## *Two Main Technology Types*

- ◆ **Type 2** – Data Analytics
- ◆ Examples : Bizrights, ACL CCM, IDEA, Business Objects, Others



# Measuring Success

# Measuring Success

## *Key Success Factors of CA/CM*

### Senior executive support

- Executive involvement at all stages of the project including opportunity identification, selection, prioritization and sign-off
- Clear CM leadership roles to drive cultural change
- Identification of control owners to report failures, escalate issues, etc.

### Technology tools and experienced resources

- Fact-based approach to identification, quantification and prioritization of CM opportunities
- Selection of appropriate CM tools to contain costs and speed up communication
- Experienced staff who can commence fieldwork immediately

### Established approach to CM

- Global continuous monitoring framework and approach
- Identification of key control check points
- Methodology emphasizes risk and continuous improvement

### Well planned approach

- Detailed project initiation and work plan documents
- Knowledge of and linkage to enterprise risk exposures
- Organization's risk profile is fundamental to the assessment and design of the CM solution

### Organizational alignment

- Incorporation of key line management within the CM project
- Partnering with team members to help enable knowledge transfer
- Senior industry and functional practitioners

# Measuring Success

## *Potential Measures by Stakeholder*

Stakeholders	Potential Business Need	Possible Measurements
<b>Chief Financial Officer</b>	<ul style="list-style-type: none"> <li>• Obtaining measures on risk and performance</li> <li>• Rationalizing control self-assessments</li> <li>• Continuous risk assessment</li> <li>• Fraud and misconduct prevention</li> <li>• Reduced Sarbanes-Oxley (SOX) costs</li> <li>• Business continuity</li> <li>• Accountability refinement</li> </ul>	<ul style="list-style-type: none"> <li>• Decreased variability in Key Performance Indicators (KPIs)</li> <li>• Results more consistent with plan/forecast</li> <li>• Lower incidence of fines/fraud events, fraud fees</li> <li>• Reduced professional fees</li> <li>• Fewer audit adjustments</li> <li>• Reduced compliance costs (e.g., Sarbanes-Oxley)</li> </ul>
<b>Chief Information Officer</b>	<ul style="list-style-type: none"> <li>• Systems performance</li> <li>• Access controls</li> <li>• Security/Privacy/Capacity</li> <li>• Technology leveraging</li> <li>• Business continuity</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced system downtime</li> <li>• Improved performance/response time</li> <li>• Fewer violations of software licensing agreements</li> <li>• Increased number of automated controls</li> <li>• Reduced IT cost of ownership</li> </ul>

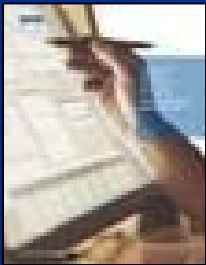
# Measuring Success

## *Potential Measures by Stakeholder*

Stakeholders	Potential Business Need	Possible Measurements
<b>Chief Audit Executive</b>	<ul style="list-style-type: none"> <li>• Continuous risk and control assessment</li> <li>• Risk-based audit plan</li> <li>• Data integrity</li> <li>• Trend identification and categorization of control weaknesses</li> <li>• Mote timely identification and reporting of errors and non-compliance</li> </ul>	<ul style="list-style-type: none"> <li>• Improved utilization</li> <li>• Reduced time to conduct risk assessment</li> <li>• Reduced time required at each auditee</li> <li>• Reduced travel costs</li> <li>• Reduced cost for bulk data analysis</li> <li>• Improved speed of reporting</li> </ul>
<b>Chief Compliance Officer</b>	<ul style="list-style-type: none"> <li>• Rationalizing compliance function</li> <li>• Regulatory compliance</li> <li>• Reduced duplication of work</li> <li>• Continuous risk assessment</li> </ul>	<ul style="list-style-type: none"> <li>• Streamlined reporting processes</li> <li>• Improved compliance statistics</li> <li>• Improved ability to assign accountability</li> <li>• Lower incidence of fines</li> </ul>

# Thought Leadership

*Experience and Industry Knowledge to Assist*



CA/CM: Using Technology to Drive Value by Managing Risk and Improving Performance

Investigating the Trends toward Continuous Auditing/Continuous Monitoring



CA and CM: Transforming Internal Audit and Management Monitoring to Create Value

<http://www.us.kpmg.com/>

# *Questions?*

## Presenters' Contact Details

**Jim Littley**

**KPMG LLP**

**(267) 256-1833**

**jlittley@kpmg.com**

**Deon Minnaar**

**KPMG LLP**

**(212) 872-5634**

**deonminnaar@kpmg.com**

[www.kpmg.com](http://www.kpmg.com)

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