NEbraskaCERT

Omaha's Cyber Security Forum

Integrating IT Risk Management with ERM

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7:30 AM to 9:00 AM

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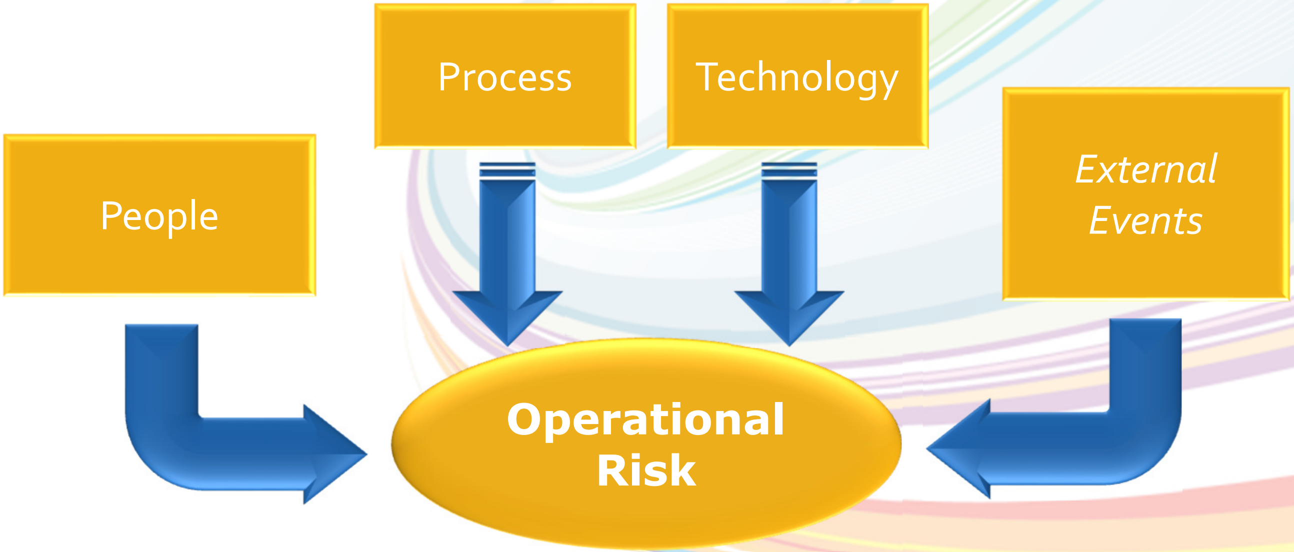
Learning Objectives

- Develop and implement an enterprise risk management framework
- Align the enterprise risk management framework to support the needs of IT
- Implement a multifaceted approach for embedding risk management activities into the everyday culture of IT
- Utilize tools and education to build support and drive adoption
- Foster a collaborative partnership between risk management and IT

Operational Risk Defined

Operational Risk

The risk of loss resulting from inadequate or failed processes, people and systems, or from external events.



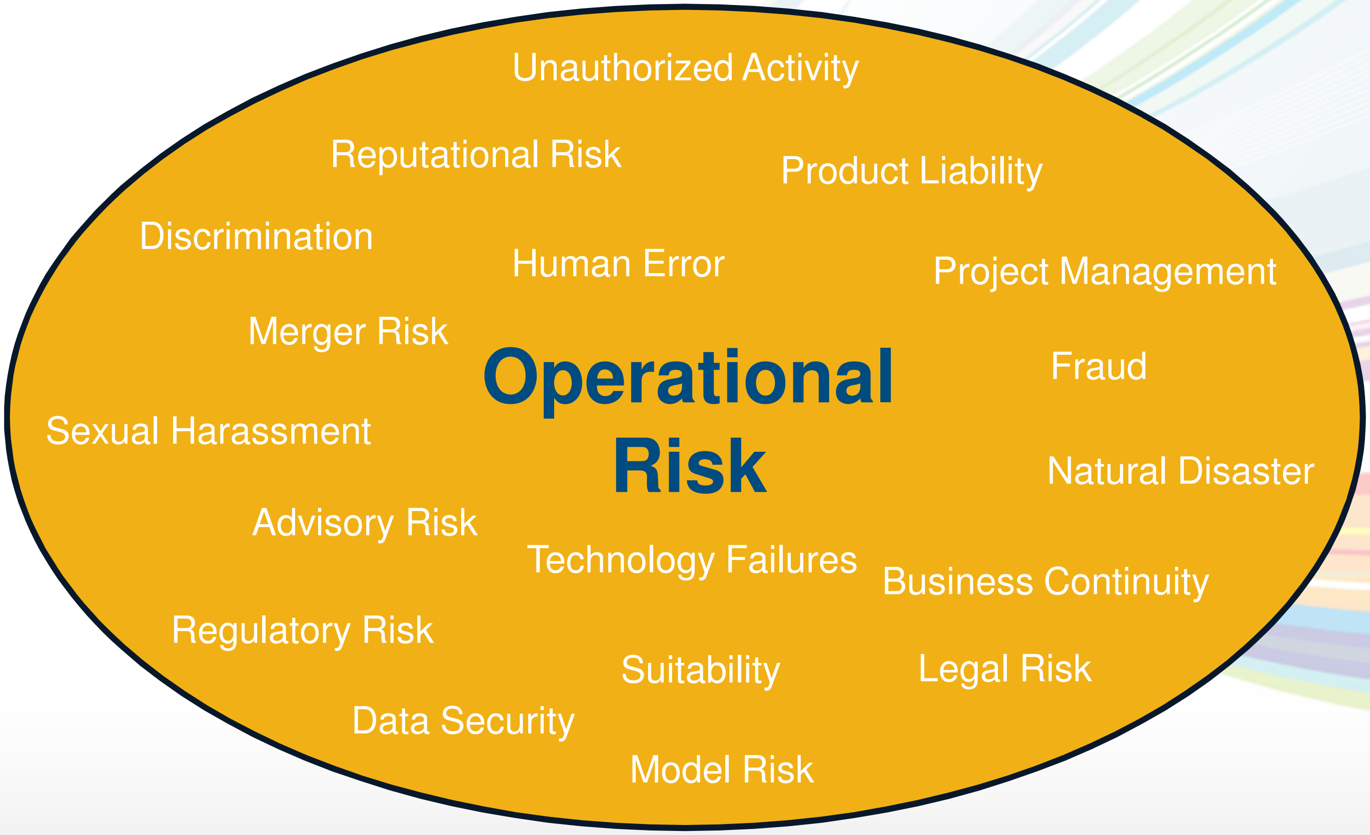
Internal Failures or Breakdowns

- **People**: Failures of Employees, Management, Conflict of Interest, or Internal Fraud
- **Process**: Failures or Weaknesses in Key Processes, Non-Compliance with Policies, Regulations, or Failures in Products or Services
- **Technology**: Operational Failures, Code Defects, Security Vulnerabilities & Breaches

External Events

- ***External**:* Fraud or Litigation, Economic Conditions, Competitors, Political, Geographic

Types of Operational Risk



Operational Risk

Unauthorized Activity

Reputational Risk

Product Liability

Discrimination

Human Error

Project Management

Merger Risk

Fraud

Sexual Harassment

Natural Disaster

Advisory Risk

Technology Failures

Business Continuity

Regulatory Risk

Suitability

Legal Risk

Data Security

Model Risk

Specific Risk Types

- **Business Process Risk**
  - Transaction Processing Risk – Risk arising from failed internal processes related to the processing of transactions
  - Physical Security Risk – Risk arising from failed internal controls intended to protect physical assets
  - Business Continuity Risk – Risk resulting from business disruption
- **Technology Risk**
  - Risk associated with the use of systems and technology
- **Human Capital Risk**
  - Risk of loss arising from the actions and inactions of people
- **Compliance Risk**
  - Risk associated with compliance of laws, regulations, and policies

- **Legal Risk**
  - Risk associated with enforceability of contracts and interpretation of laws
- **Financial Risk**
  - Risk of loss arising from failed financial controls impacting the firm's ability to meet its operational and regulatory financial obligations
- **Vendor Risk**
  - Risk associated with the use of third party service providers for services or outsourcing of services
- **Implementation Risk**
  - Risk associated with operational and systems readiness to support and service products, systems, and clients

Evolution of Risk Management

- Additional Board Scrutiny During the Financial Crisis
- Evolution of the Chief Risk Officer Role
  - Importance of Governance, Risk, and Controls Framework (from Financial Crisis)
  - Risk Advocate with Executive Management Team
  - Clear Accountability for Risk Management Strategy and Execution
  - Set Tone from the Top about the Importance of being a Risk-Aware Organization
- Expanded Risk and Governance Structures
  - Board Risk Committee
  - Staffing Model for Risk Analysis
  - 'Risk Appetite' and Risk Management Frameworks
  - Tools to Support Risk Management

Roles, Responsibilities, and Tools

Corporate Risk Governance

- ➢ Develops, Maintains, and Enhances the Governance Structure
  - ▪ Report Generation & Data Sourcing
  - ▪ Maintain Charters, Minutes, and Policies
  - ▪ Tool & Application Development
  - ▪ Framework Development

Corporate Risk Services (Insurance)

- ➢ Impact Mitigation Utilizing Risk Transfer Techniques
  - ▪ Contract Review & Insurance Management
  - ▪ Claim Management & Coordination
  - ▪ Crisis Management

Enterprise Continuity Management

- ➢ Direction and Leadership in Preparing, Testing and Reporting on BCP; First Response for Business Interruption
  - ▪ Business Contingency Planning
  - ▪ Business Impact Analysis
  - ▪ Recovery Plan Testing
  - ▪ Continuity Event Management

Internal Control Assessment Program (ICAP)

- ➢ Assess Internal Controls are Operating as Designed
  - ▪ Quarterly Testing & Certification
  - ▪ Assessment of the Internal Controls (SOX)

Corporate Risk and Controls (Risk Coverage Officers)

- ➢ Promotes Adoption of a Consistent Framework in Organization
  - ▪ Point of Contact for Management
  - ▪ Implement Risk Framework
  - ▪ Risk Advisory
  - ▪ Risk Analysis
  - ▪ Assessment Activity
  - ▪ Exceptions and Risk Acceptances
  - ▪ Support Business Continuity
  - ▪ Proactive Risk Management

Risk Management Tools

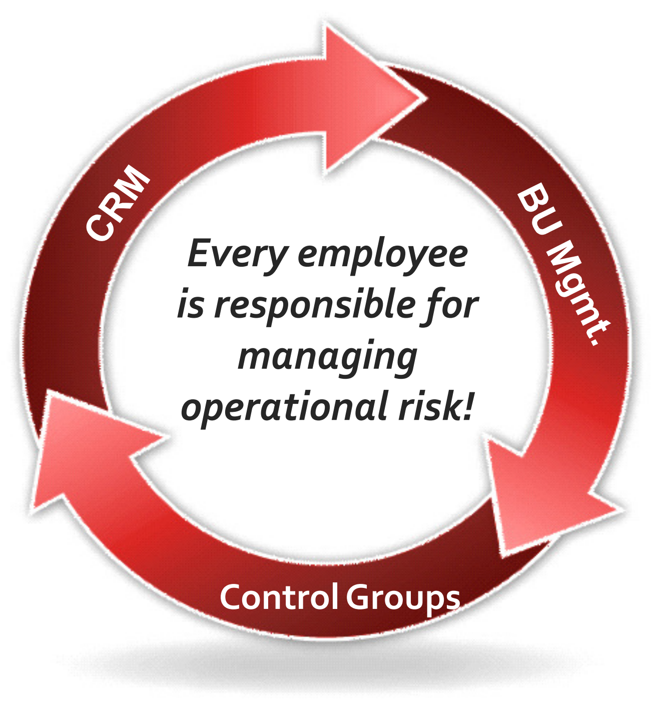
- ➢ Utilize RSA Archer Platform (RSA GRC Modules)
- ➢ Manage Risks, Demonstrate Compliance, and Automate Business Processes
- ➢ Implemented Four Modules
  - ▪ Issue Management
  - ▪ Operational Risk Events
  - ▪ Key Risk Indicators
  - ▪ *Strategic Risk Assessments*

Corporate Risk Management (CRM) Mission Statement:
"Minimize unexpected losses/gains and earnings volatility, and provide management information that drives strategic decision making and helps the business meet its objectives"

Business Partnership Mo

Roles and Responsibilities (Hub and Spoke Model)

- Corporate Risk Management (CRM)
  Strategy: Define, develop, maintain, and implement risk framework, best-practice tools and risk management processes; measure, monitor, and report operational risk issues to ensure they remain within the organization's risk appetite
- Business Unit (BU) Management
  Tactical Implementation: Framework implementation; daily monitoring of business activities and associated risk management. Own risk mitigation activities within their span of control
- Control Groups
  Testing and Verification: Provide oversight over Specific Risk Types (SRTs); includes Audit, Legal, Compliance, Operations, Technology, Finance, HR, etc.



Every employee is responsible for managing operational risk!

- *Effective risk management requires managers to:*
  - *Understand the actual and prospective risks facing their business and department*
  - *Develop an opinion about, and define, their risk exposures*
  - *Execute an effective strategy to mitigate controllable risks*
- *Employees also need to:*
  - *Recognize the risks in their business unit and its processes*
  - *Know the actions they need to take to control those risks*

Five Components of our ORM Framework

1. **Risk (Loss) Events**
   The collection and analysis of operational risk events (financial and non-financial), including the identification of the root cause that has led to their occurrence, the impact to the organization, and any remediation plans to mitigate such risk

2. **Risk Indicators**
   The development of indicators and thresholds that management utilizes to effectively track and monitor changes in the levels of significant risk over a period of time

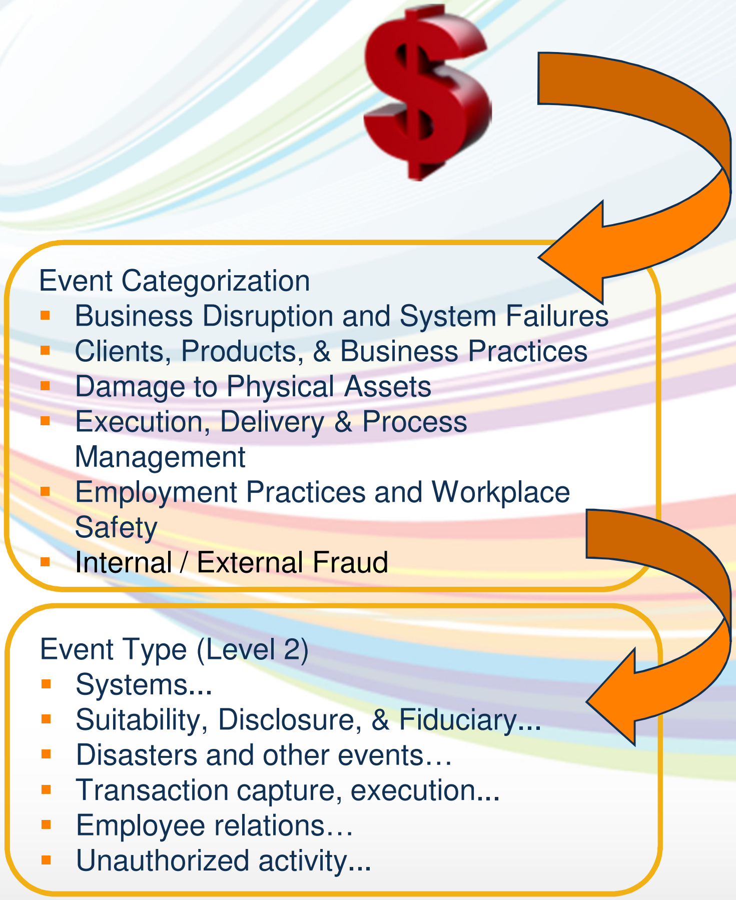
3. **Risk Assessments**
   Management's identification and assessment of its key risk areas and the effectiveness of related controls to mitigate such risk

4. **Issue Management**
   The tracking and remediation of issues arising from risk management activities provides transparency to senior management and also enhances the ability of management to make decisions around potential mitigation strategies

5. **Reporting, Analysis, & Governance**
   Deliver risk analysis and reporting to senior management which creates transparency and supports decision making

1. Risk (Loss) Events

- Key Component for the Identification and Measurement of Operational Risk
  - Timely Notification and Comprehensive Reporting of Risk Events
- Risk Events occur when an Operational Risk Failure Takes Place and Leads to a Negative or Positive Monetary Impact, or Zero Impact with Potential Loss (Near Miss)
- Risk Management is Responsible for the Overall Risk Event Data Collection Process
  - Working with Management to Quantify Losses
  - Categorizing and Analyzing Data to Determine Systemic Issues to be Addressed and Lessons Learned (Root Cause Analysis)
- Management is Responsible for Ensuring that all Risk Events are Reported, Escalated, and Remediated as necessary



Event Categorization

- Business Disruption and System Failures
- Clients, Products, & Business Practices
- Damage to Physical Assets
- Execution, Delivery & Process Management
- Employment Practices and Workplace Safety
- Internal / External Fraud

Event Type (Level 2)

- Systems...
- Suitability, Disclosure, & Fiduciary...
- Disasters and other events…
- Transaction capture, execution...
- Employee relations…
- Unauthorized activity...

Financial Losses ($), CC Incident Materiality, Security Event Materiality, Policy Exceptions, Project Related, QA Defects, others?

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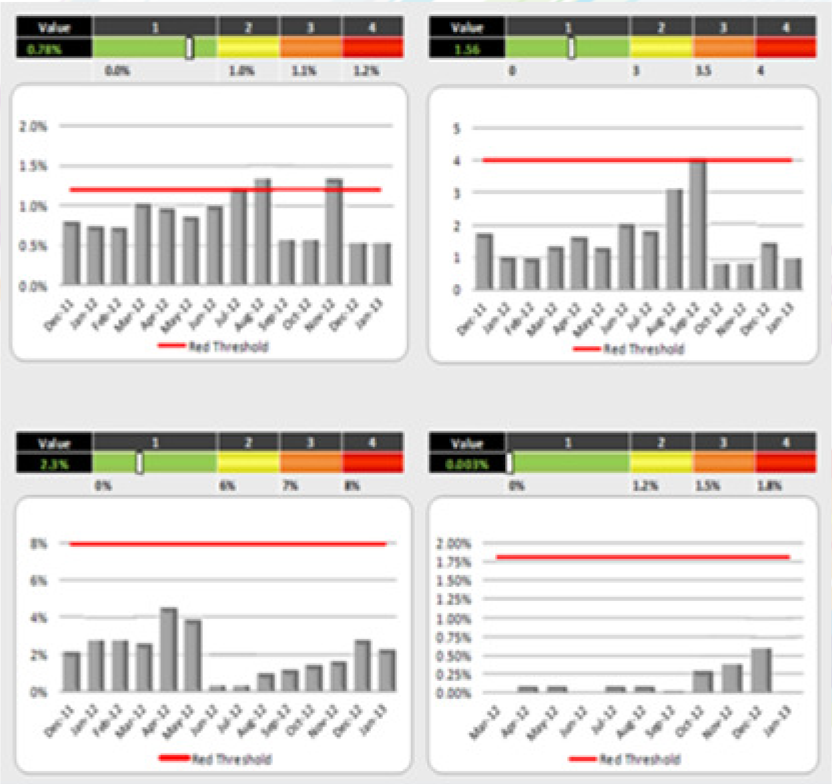
2. Risk Indicators

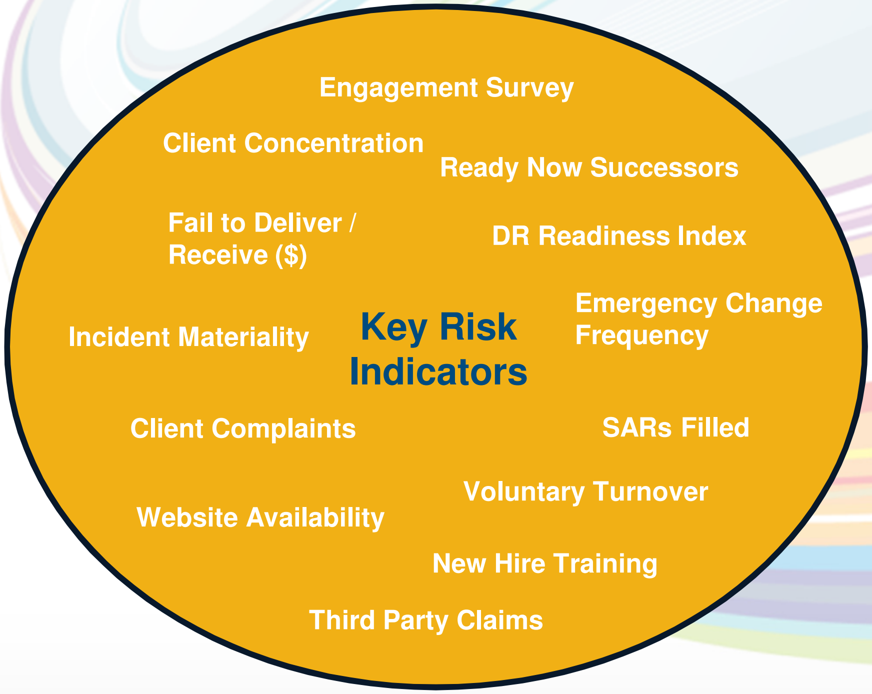
- ***Risk Appetite Metrics*** are Board-level metrics that track risk to the maximum exposure the organization is currently prepared to accept for critical risk-producing activities
- ***Key Risk Indicators* (KRIs)** are an indicator that management uses to effectively track and monitor changes in the levels of significant risk over a period of time
- ***Key Performance Indicators (KPIs) / Operating Metrics*** are measurements used to gauge some quantifiable component of a department's performance; used by department level management to monitor their day to day business activities



2. Risk Indicators (continued)

Key Risk Indicators

- “Forward” Looking Measurements of Risk
- Relevant, Measurable, Predictive and Easy to Monitor
- By Themselves CANNOT Reduce Risks
- Escalation Thresholds as Trigger Points
- Trigger Mitigation & Response, Improve Communication & Transparency, Strengthen & Validate Risk Management
- Development: Key Processes, Key Risks, Existing / New Risk Indicators


Key Risk Indicators

Engagement Survey

Client Concentration

Ready Now Successors

Fail to Deliver / Receive ($)

DR Readiness Index

Emergency Change Frequency

Incident Materiality

Client Complaints

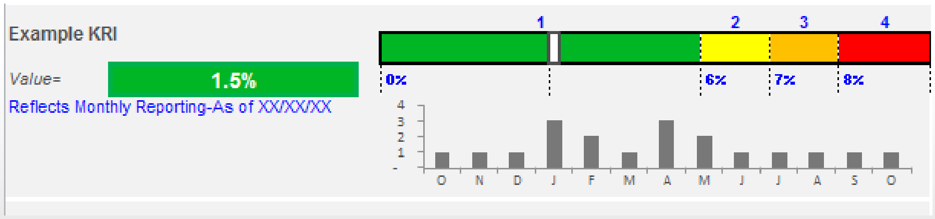
SARs Filled

Voluntary Turnover

Website Availability

New Hire Training

Third Party Claims


Example KRI

Value= 1.5%

Reflects Monthly Reporting-As of XX/XX/XX

3. Risk Assessments

- **Strategic Risk Assessments**
  Identify, evaluate and prioritize a group of business risks that could significantly impact a company's or business unit's ability to accomplish its business objectives
- **Internal Control Assessments**
  Ability for management to measure its system of internal controls
- **Product Risk Assessments**
  Applies to new products and/or services, new business initiatives, or existing products
- **Target Risk Assessments**
  Used to identify and measure the significance and likelihood of a control breach and possible financial or reputation impact that could occur within a function or specific process
- **Internal and External Audits or Examinations**
  Used to determine if there are systemic issues that need to be addressed, tracked, and remedied to completion

Questionnaire / Assessment

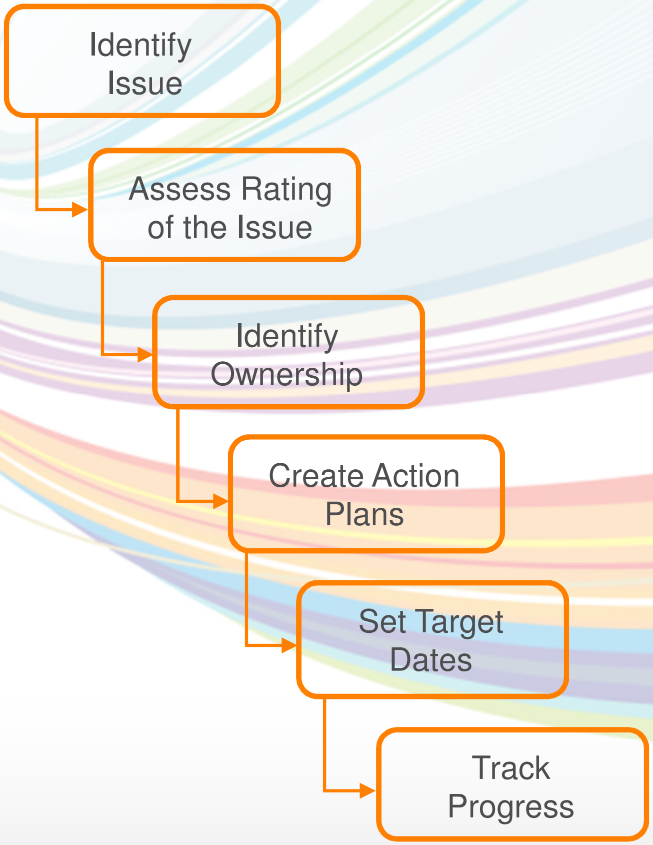
Evaluate on a scale of:

Low Risk ⟷ High Risk

- Inherent Risk
- Control Effectiveness / Risk Mitigation
- Assess Residual Risk

4. Issue Management

- Issues are Raised in order for Management to Mitigate Risks of Future Losses or other Undesirable Events
- Issues are Documented and Tracked for Management to make Business Decisions on the Treatment of the Risk
- Identified Mitigating Plans need to be Tracked to Completion
- Issues from Various Sources Need to be Consolidated



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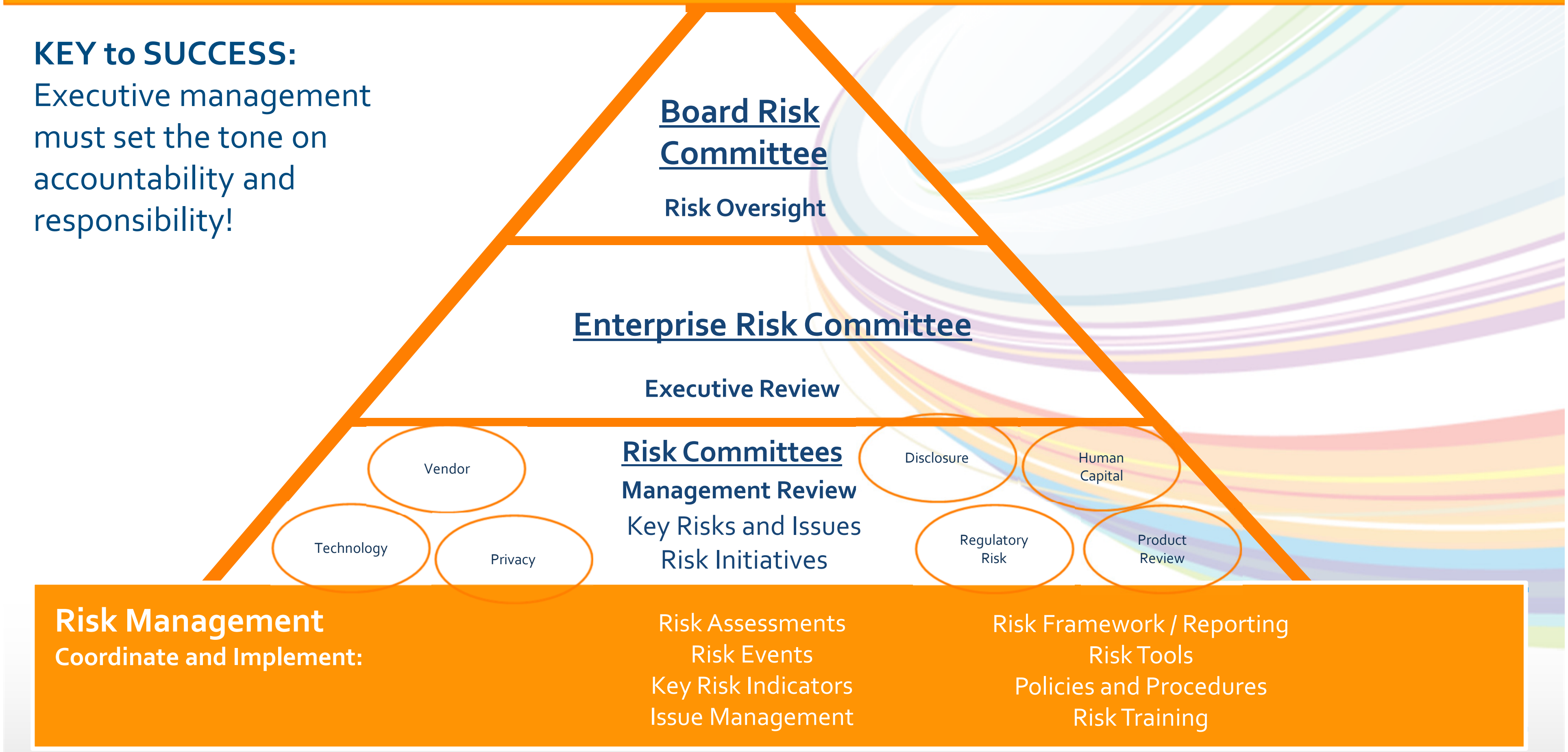
5. Reporting, Analysis, & Governance

- Escalation, Reporting, and Monitoring of Operational Risk must be Sufficiently Transparent, Timely , and Actionable
- Risk Management is Responsible for Developing, Maintaining and Updating Standard Reporting Templates and Identifying and Managing Data Sources for Analysis
- Business Management is Responsible for Ensuring that Sufficient Information is Provided to all Levels of Management
- Control Groups are Responsible for Ensuring that Sufficient Reporting within their area of Expertise is Reported

Enterprise Risk Committee

5. Reporting, Analysis, & Governance (continued)

KEY to SUCCESS:
Executive management must set the tone on accountability and responsibility!



Board Risk Committee

Risk Oversight

Enterprise Risk Committee

Executive Review

Risk Committees

Management Review

Key Risks and Issues
Risk Initiatives

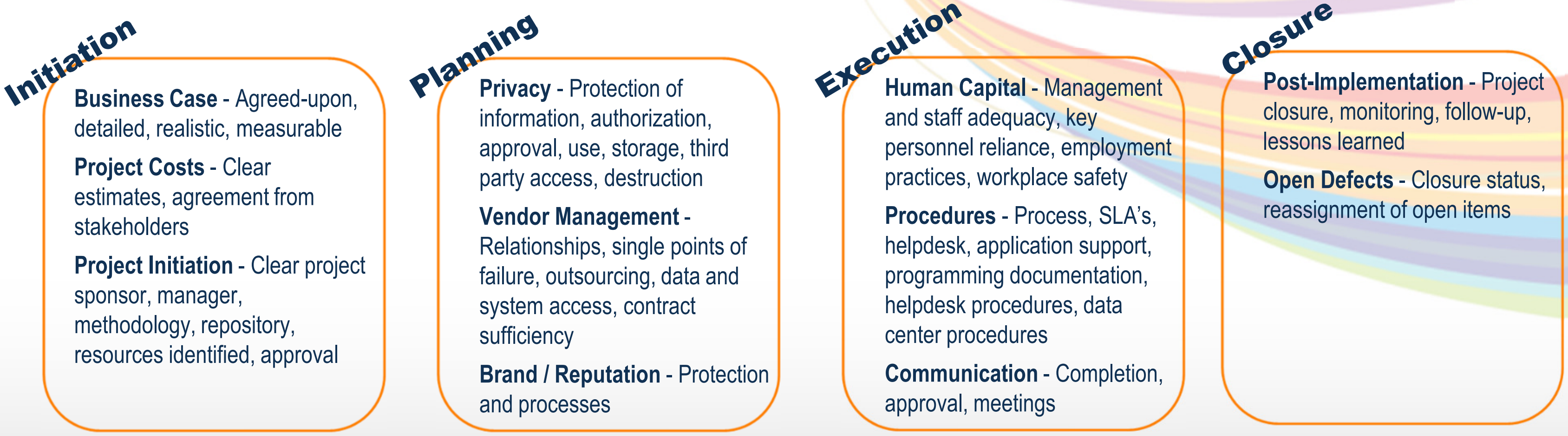
Risk Management
Coordinate and Implement:

Risk Assessments
Risk Events
Key Risk Indicators
Issue Management

Risk Framework / Reporting
Risk Tools
Policies and Procedures
Risk Training

Proactive Risk Management

- Proactive Engagement on Critical Projects and Initiatives
  - **Enterprise Monitoring** – Maintain Awareness of Key Projects and Initiatives in the Organization
  - **Risk Assessment and Staffing** – Assess Projects and Initiatives by Risk in an Accurate and Timely Manner and Staff Appropriately
  - **Execution Framework** – Consistent Risk Checklist Approach
  - **Communication** – Raising Risks to Management



Initiation

Business Case - Agreed-upon, detailed, realistic, measurable

Project Costs - Clear estimates, agreement from stakeholders

Project Initiation - Clear project sponsor, manager, methodology, repository, resources identified, approval

Planning

Privacy - Protection of information, authorization, approval, use, storage, third party access, destruction

Vendor Management - Relationships, single points of failure, outsourcing, data and system access, contract sufficiency

Brand / Reputation - Protection and processes

Execution

Human Capital - Management and staff adequacy, key personnel reliance, employment practices, workplace safety

Procedures - Process, SLA's, helpdesk, application support, programming documentation, helpdesk procedures, data center procedures

Communication - Completion, approval, meetings

Closure

Post-Implementation - Project closure, monitoring, follow-up, lessons learned

Open Defects - Closure status, reassignment of open items

Conclusion

- Risk Management is a Journey, not a Destination
- More to Come…

Thank You!

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Vlad Liska is a Director of Operational Risk & Controls in the Corporate Risk Management Group at TD Ameritrade based in Omaha, NE. He serves as the risk coverage officer for the technology and corporate support functions with focus on risk events (including fraud and technology incidents), key risk indicators, risk committees, and overall consultation with management on current and emerging risks in the environment. Prior to this role, Vlad has worked in various positions in the internal audit group at TD Ameritrade as well as various technology and audit positions with PricewaterhouseCoopers, First Data Corporation, and the Principal Financial Group.

Vlad holds a Bachelor of Arts degree in Computer Science from Simpson College in Indianola, Iowa and a Master of Science in Information Technology Management from Creighton University in Omaha, Nebraska. He has served on the faculty at the University of Nebraska at Omaha and has spoken at various local and national conferences including the IIA District Conference, NebraskaCERT, MISTI SuperStrategies, NA CACS, and AuditWorld. Vlad is a Certified Internal Auditor (CIA), a Certified Information Systems Auditor (CISA), Certified in Risk Management Assurance (CRMA), and is licensed as a FINRA Registered General Securities Representative (Series 7), a Register Investment Advisor in the State of Nebraska (Series 66), and a General Securities Principal (Series 24). Vlad is a member of the Information Systems Audit and Control Association (ISACA), the Institute of Internal Auditors (IIA), and the Risk Management Association (RMA).