A Guide to IT Risk Assessment for Financial Institutions

March 2, 2011

Pivot Group and Porter Keadle Moore present:

***Webinar Series:* Enterprise Risk Management for Financial Institutions**

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Introductions

- **Presenters:**
  - **Jim Soenksen**, CEO, Pivot Group, LLC
  - **Chris Bowler,** Senior Manager, Porter Keadle Moore, LLP

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Introductions

- **Pivot Group**

  Independent Audit, Assessment and Compliance Firm providing exclusively Data Privacy and Protection Services

- **Porter Keadle Moore**

  A leading Atlanta accounting firm offering a full range of assurance and advisory services in the areas of audit, tax and systems.

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Enterprise Risk Management Program for Financial Institutions Webinar Series

- **February 16** - Building an Enterprise Risk Management Program
- **Today** - A Guide to IT Risk Assessment
- **March 16** – Identifying and Classifying Critical Data Risks
- **March 30** – Applying Risk Assessment Activities to your Business Processes-Lending
- **April 13** - Enterprise Risk Management Programs: Pulling the Pieces Together

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Today's Learning Objectives

- What should be included in an IT Risk Assessment
- How it fits into the ERM Framework
- Share effective audit techniques and tools
- Who needs to be involved in the process.
- The ideal timing to perform your assessment

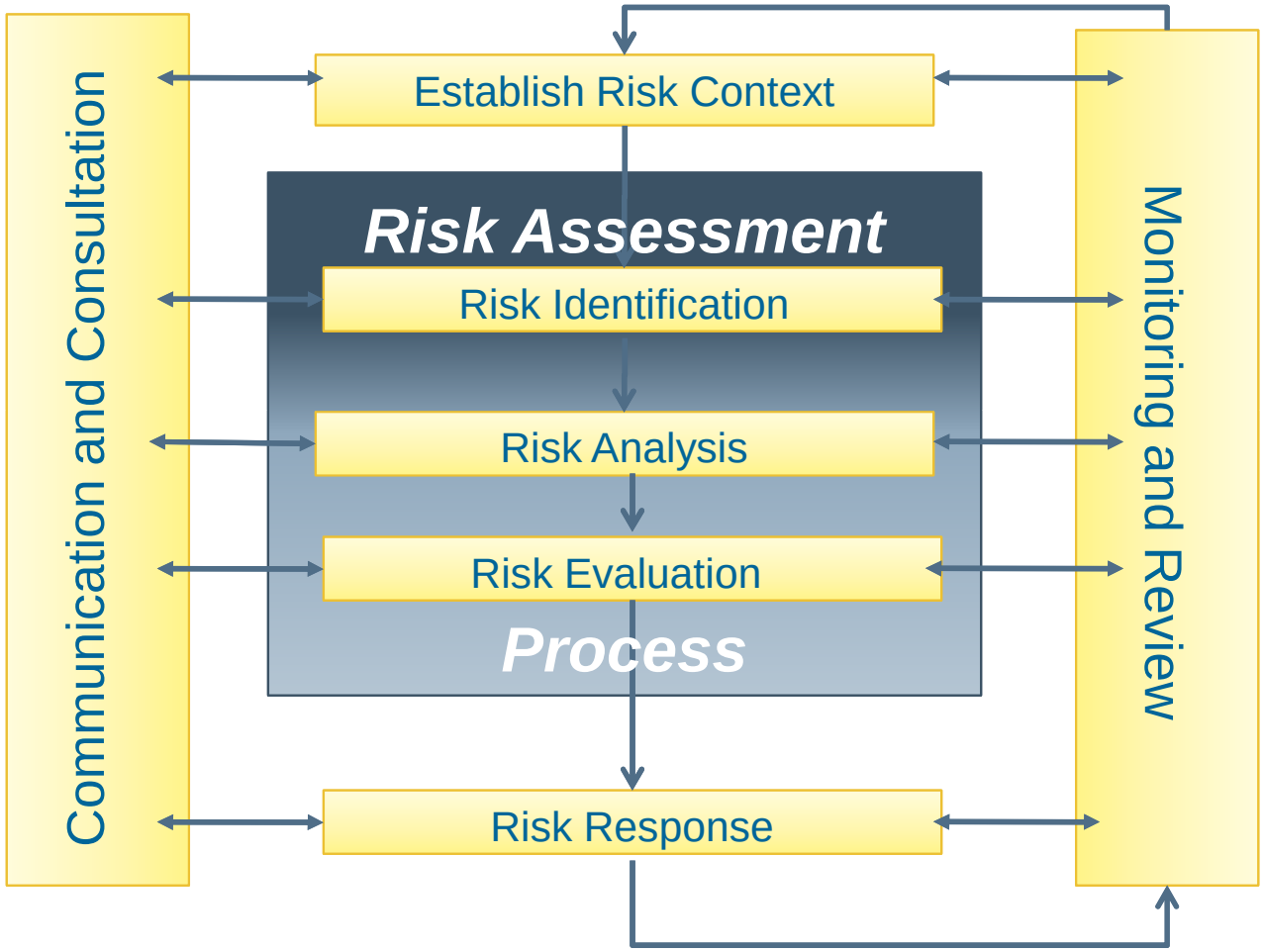
Today's Agenda

- Review of Session One Main Points
- How to Assess Your IT Operation's Strategic, Financial, Operational and Compliance Risks
- Case Study
- Recommended Audit Techniques
- Audit Tools that Can Help
- Risk Mitigation Best Practices
- Questions

Review: Building Your ERM Check List

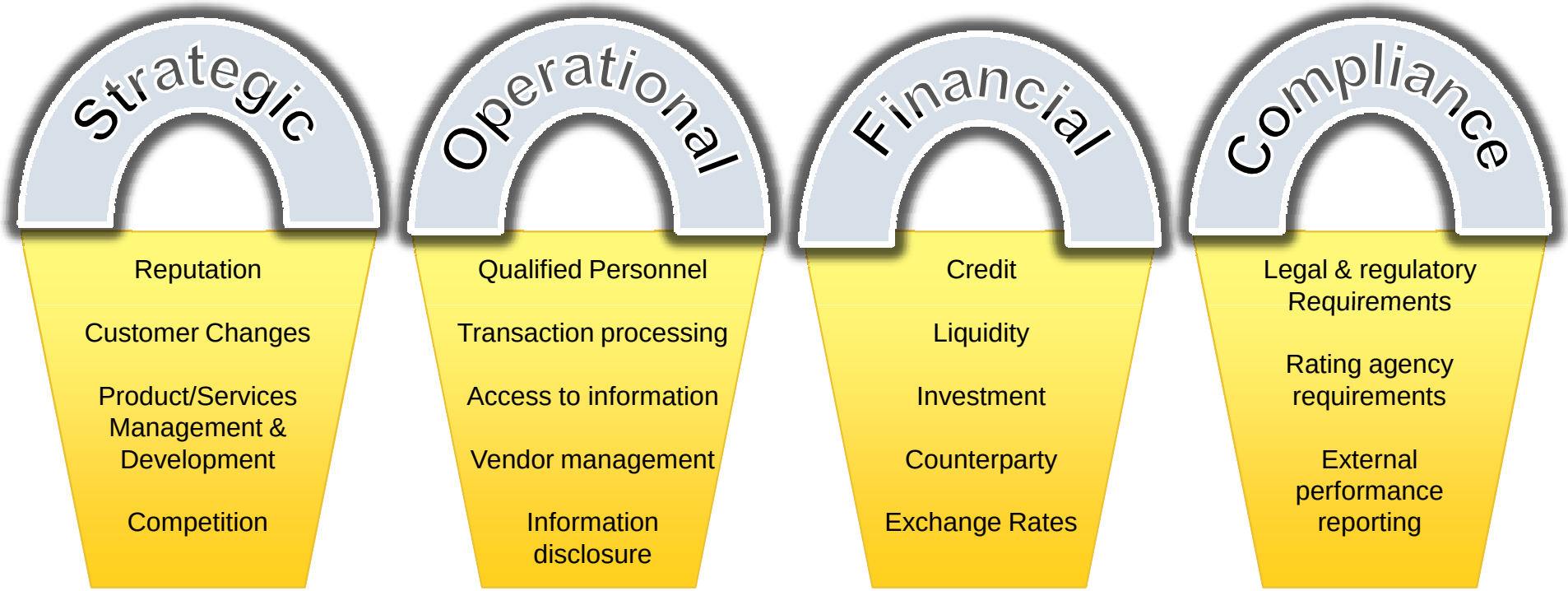
- Identify & Tailor Your Framework
- Establish a Communication Plan
- Confirm Business Goals & Objectives
- Identify Key Business Processes & Owners
- Define Risk Context & Terms
- Complete Baseline Risk Assessment
- Agree to Residual Risks & Responses
- Create Monitoring Mechanisms
- Begin Reporting Cycle

Review: Elements of An Effective Risk Management Program



Based on ISO 31000

Review: Defining Your Risk Appetite & Profile



Review: Elements of An Effective Risk Management Program

Effective Risk Management Program

- Includes a systematic top-down approach;
- Summarizes the risks associated with the key business units and/or processes.
- Provides a common view that ranks risks and the risk management activities.
- Is based on information, analysis and process understanding.
- Assists management with establishing a baseline risk profile.

Objectives for Information Systems

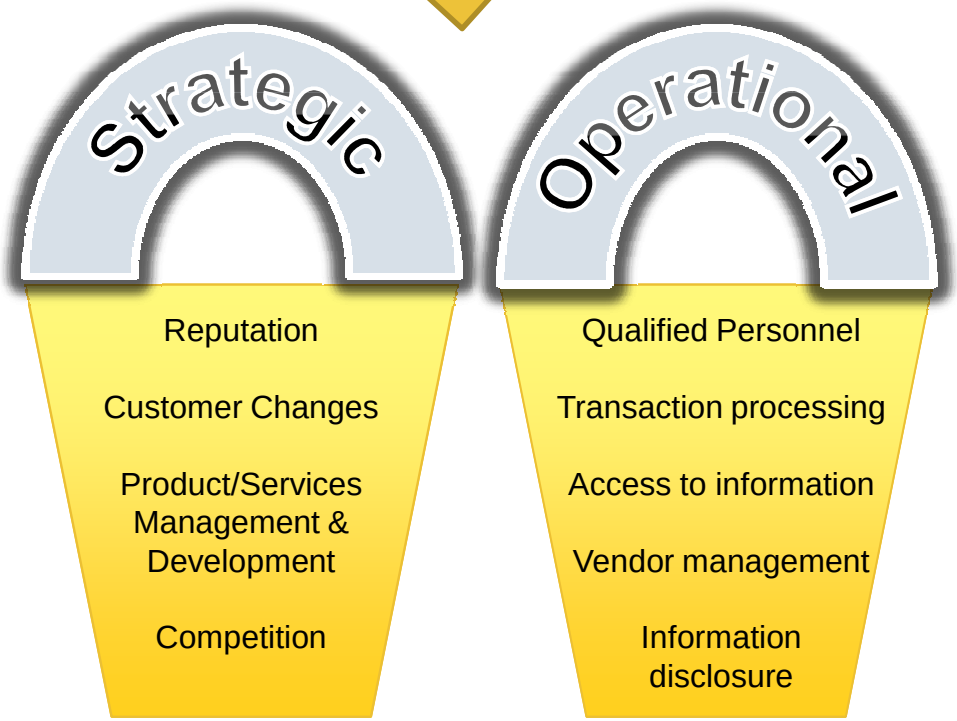
Objectives

- Completeness and Accuracy of Transaction Processing
- Restricted Access to Programs & Data
- Accurate and Complete Customer Information
- Timely Access to Management Reporting

Key Risks

Objectives

Relevant Risks



Risk Rating Scales

- Risk Ratings
  - **Low:** Risk is less than remote with minimal impact on business performance
  - **Medium –Low:** Risk is remote with some minor (< 5%) impact on business performance
  - **Medium:** Risk is possible with moderate impact (5% - 10%) on business performance
  - **Medium-High:** Risk is present with significant impact (10% - 20%) on business performance
  - **High:** Risk is present with material impact (>20%)on the business performance

Review: Defining Your Risk Appetite & Profile

Objectives

Relevant Risks

Management Experience

Practices

People

Systems

Process Maturity Measurement

Risk Management Maturity Model

- **Ad-Hoc:** There are not any organizational wide established basic risk management processes; however, some established business units and areas have risk management processes, but these are applied only on an ad-hoc and sporadic basis to various business processes.
- **Basic:** Some basic risk management processes and standards have been established within the organization, but are required only on selected complex, critical, or high-visibility business processes with certain dollar thresholds, or with certain customers.

Capability Maturity Model

Risk Management Maturity Model

- **Structured:** Risk management processes and standards are fully established, institutionalized, and mandated throughout the entire organization.
- **Integrated:** Basic risk management processes are integrated with other organizational core processes such as cost control, schedule management, performance management, and systems engineering.
- **Optimized:** Risk management processes are evaluated periodically using efficiency and effectiveness metrics. Continuous process improvement efforts are implemented to improve the risk management processes across all business units.

Considering Changes

- External
  - Economic
  - Market
  - Competitors
  - Regulatory
- Internal
  - Organizational
  - Practices
  - People
  - Systems

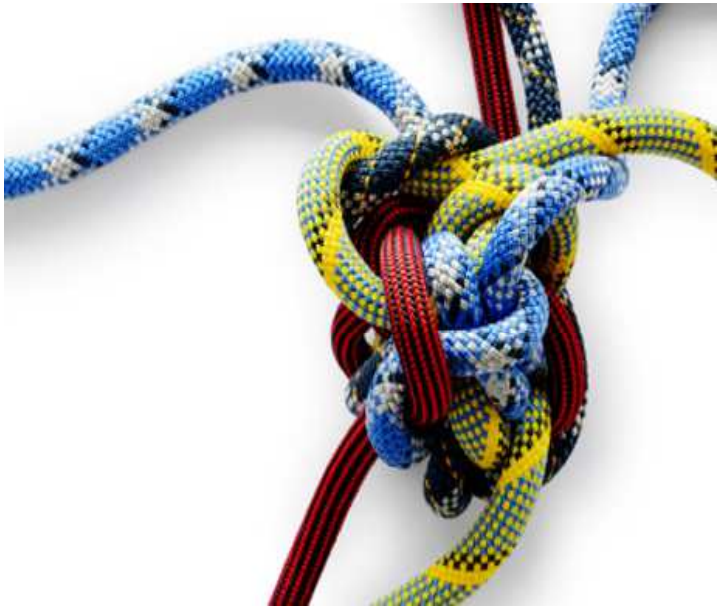
Considering Changes

“If you're in a bad situation, don't worry it'll change… If you're in a good situation, don't worry it'll change. “ John A. Simone, Sr.

Complexity !

Some Indicators:

- Centralized vs. Decentralized;
- Management of Internal and External Resources;
- Level of Integration For System Interfaces;
- Manual vs. Automated; and
- Cross-Functional Teams;



How to Assess Your IT Operation: IT Areas Included

- Based on the results of your ERM Phase 1….
- Organization Structure including roles and responsibilities
- Policy and Procedures
- Configuration and Change Management Activities
- Information Security Architecture
- Information Security Administration
- Current and Future Software Applications
- Records Management and Data Classification
- Culture and Awareness

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How to Assess Your IT Operation: IT Areas Included-Continued

- Access Controls
- Data Center Operation
- End User Support Activities
- Data and Network Security Controls
- Availability of Data for Financial and Managerial Reporting
- Business Continuity and Disaster Recovery Plans
- Physical Controls

How to Assess Your IT Operation: Approach

- Survey Inherent Risks
  - Include Internal and External Risks
  - Identify the Degree and Sources of Risks
  - Review complexity of Key IT Support Functions
  - Determine indicators of increasing and decreasing risks
- Review Specific Risk Response Activities
  - Assess strength of IT Control Environment
  - Review Policy and Procedures
  - Assess the information supporting management's decisions
  - Review the nature and timing of control activities

How to Assess Your IT Operations: Approach

- Determine Residual Risks
  - Identify key risk & performance indicators
  - Evaluate the probability and severity
  - Assess current risk mitigation activities
  - Provide risk management improvement recommendations

Case Study- Objectives

- Qualitative IT Risk Assessment
- Identify Inherent **Strategic** and **Operational** Risks
- Considers Control Activities
- Identifies Resources In Place
- Evaluate Risk Management Process Change Capabilities
- Area of Focus: Information Security-Logical Access to Programs and Data
- Vendor Management

Case Study- Relevant Risks

- Unauthorized disclosure of PII
- Data Integrity/System Vulnerabilities
- Operational Interruption/System Availability

Case Study: Operational Risk

- Definition: Tangible Internal Risks related to:
  - Internal controls
  - Operating Processes
  - Management Information Systems
  - Employee/Vendor Integrity

Case Study: Residual Operational Risks

- Policies and Procedures Out of Date
- Network/systems Managed Internally
- Good Layered Network Defenses
- User Access Granted by Authorized Management
- Informal User Termination Process
- Change Management Activities not Documented
- Security Logs not Proactively Reviewed
- Network Access Authentication Exists

Case Study: Residual Operational Risk (Continued)

- Network Level Access does not enforce segregation of duties
- Network Administration Activities are not consistently documented or reviewed
- Outside Vendor performs PCI Scanning
- Vendor Management Program does not exist
- Physical Access Controls are good
- External Annual Audit performed; No material deficiencies

Case Study: Residual Strategic Risks

- Reputation: Unauthorized Exposure of PII based on operational risk.
- Security Architecture: The overall architecture is good. Deficiency in monitoring, alerting, governance , and oversight.

Case Study: Risk Rating

- Inherent Risks: Medium High
- Residual Operational Risks: Medium
- Residual Strategic Risks: Medium Low

Process Area: Information Security - Logical Access to Programs & Data					
Quality of Management Activities	Degree of Change in Area	Complexity of Area/Process	Inherent Risks	Residual Operational Risks	Residual Strategic Risks
Basic ●	Moderate ●	High ●	Medium-High	Medium	Medium-Low

Stakeholders For Your ERM

- CEO
- CFO
- COO
- CIO
- Chief Risk Officer
- Chief Compliance Officer
- Data Privacy Officers
- Audit- Internal/External
- Business Unit/Department Owners

Information Collection Techniques

- Interviews and Group Discussions
- Check Lists, Questionnaires, and Surveys
- Documentation Reviews
- Test Sampling Examples
  - Data Discovery
  - Walk-A-Rounds
  - Management Reports
  - Incident Reports
  - Personnel Files
  - Policy and Procedures
  - IT Systems Controls

Tools That Can Help

- Survey and Questionnaire Software
- Remote Meeting Software
- Document Sharing/Share Point
- Remediation Tracking
- Data Discovery
- Evaluation and Scoring Metrics
- Risk Management Dashboard
- Governance, Risk, and Compliance Software

Risk Mitigation Best Practices

- Formal Information Security Program
- Implementation of Policy, IT, and Awareness Controls
- Regular Reviews of Policies and Procedures
- Current Awareness and Training Programs
- Regular Tests of Security Controls
- Regular Tests of IT Controls
- Regular Critical Vendor Reviews
- Regular Review of Incident Response Program
- Regular Review of BC/DR Program

Risk Mitigation Best Practices- Continued

- Regular Data Discovery and Inventory
- Regular Review of Records Management Program
- Establish a Baseline
- Continual Improvement of Baseline
- Establish a Risk Management Committee

IT Risk Assessment Best Practices: When to Perform

- Perform at least annually
- Perform when a significant event is **about** to occur
- Perform when a significant event **has** occurred
- Utilize **objective** resources
- Research and Confirm regulatory compliance obligations
- Validate Critical Data Location and Controls
- **Continual** Remediation, Validation, and Monitoring

IT Risk Assessment Check List

- Base IT Assessment on ERM Framework
- Establish a Risk Management Committee
- Determine Objectives
- Identify Relevant Risks
- Determine Scope
- Include *all* Internal Stakeholders
- Identify *all* Critical External Parties
- Determine Best Information Gathering Techniques
- Perform Objectively
- Agree on Mitigation Best Practices
- Establish Risk Baseline
- Build on Continual Improvement

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Next Webinar

- **March 16**- Identifying and Classifying Critical Data Risks
- Learning Objectives
  - Techniques for Identifying and Classifying Critical Data
  - Compliance Requirements for Data and Personal Identifiable Information (PII)
  - Data Protection Best Practices
  - Examples of Technologies that Can Help
  - A “Checklist” of Critical Success Factors for Data Risk Management

Questions?

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