



Enterprise Risk Management



CardinalHealth

Essential to care™

Agenda

- CAH Background
- ERM Objectives & Background
- Methodology
- Quantification Framework
- Escalation Framework
- Governance Framework

Quick Facts

- **90% of U.S. hospitals** use Cardinal Health products or services
- **More than 50,000 deliveries** are made each day to 40,000 customer sites
- **One-third of U.S. prescriptions, medical/surgical and lab products** flow through our logistics system
- **14 million nuclear pharmaceutical prescriptions** dispensed each year

WHY ERM?

- More robust information regarding the risk landscape at Cardinal Health =
 - **Better Decision Making**
- ***BETTER DECISION MAKING = COMPETITIVE ADVANTAGE***

ERM Background

- Second attempt at ERM
 - Top-down vs. Bottom-up
- Depart from past quantification methods
- Eliminate bureaucracy, drive business adoption and ownership
- Incorporate ERM into strategic planning process

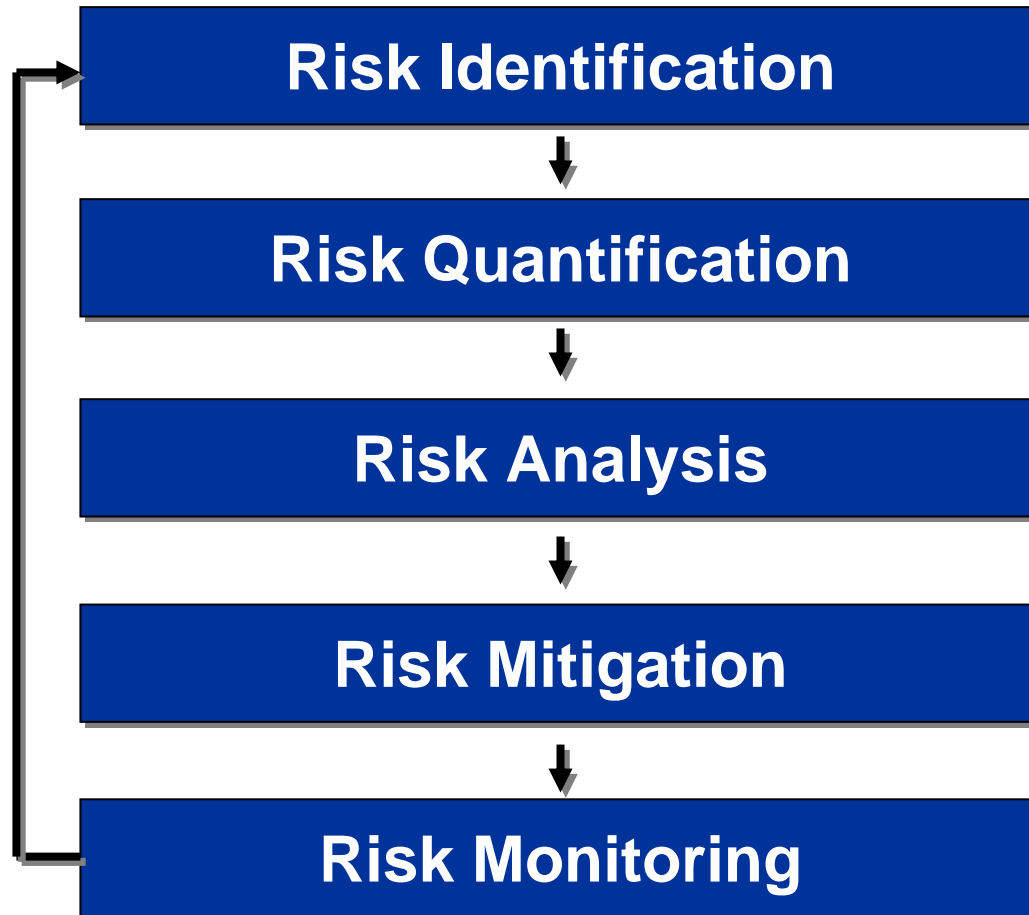
Key Objectives

- To integrate standardized risk assessment and discussion into business decision-making.
- **Motivate mitigation action and risk monitoring that otherwise would not have occurred.**
- Leverage existing organizational structures and meetings to minimize the impact of ERM activities to the business.

CAH ERM 2.0 Timeline

- **June 2008** – Compliance Risk Assessment (CRA)
 - **August 2008** – ERM methodology redesigned
 - **September 2008** – CRA Completed
 - **October 2008** – ERM methodology presented to HSCS Segment leaders
 - **December 2009** – Presource Proof of Concept (POC) kicked off
 - **February 2009** – Presource POC completed
 - **March 2009** – Presented POC results to HSCS Segment leaders
 - **April 2009** – Presented ERM methodology to Operating Committee
 - **May 2009** – Presented ERM methodology to BOD for approval
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ERM Methodology



Risk Identification

- Risk Interviews with BU Senior Leadership Team
 - Strategic Management Agenda
 - Risk Brainstorming Framework

Future State:

Management will identify risks via risk self-assessments.

Risk Identification

Risk Brainstorming

Potential External Risk Sources	Potential Internal Risk Sources
<p>Economic</p> <ul style="list-style-type: none"> •Capital availability •Credit issuance, default •Concentration •Liquidity •Financial markets •Unemployment •Competition •Mergers/acquisitions <p>Natural Environment</p> <ul style="list-style-type: none"> •Emissions and waste •Energy •Natural disaster •Sustainable development 	<p>Political</p> <ul style="list-style-type: none"> •Governmental changes •Legislation •Public policy •Regulation <p>Social</p> <ul style="list-style-type: none"> •Demographics •Consumer behavior •Corporate citizenship •Privacy •Terrorism <p>Technological</p> <ul style="list-style-type: none"> •Interruptions •Electronic commerce •External data •Emerging technology

Risk Classification Framework

Economic Risk – Recession, foreign exchange rates, rating downgrade, etc.

Operational Risk – Facility loss, business disruption, process failures, etc.

Information Risk – System failure, unauthorized access, data corruption, etc.

Compliance Risk – OSHA violations, FDA violations, Litigation, etc.

Strategic Risk – Business model change, M&A, spin-off, etc.

Reputational Risk

Risk Impact Quantification

- **9 Risk Impact Dimensions**
 - Financial Metrics
 - Level of Control
 - Reputational (Investors) Metrics
 - Logical Risk Correlation
 - Customer Impact Metrics
 - Supplier Impact Metrics
 - Employee Impact Metrics
 - Business Strategy Metrics
- **5 Risk Ratings**
 - Critical
 - Severe
 - Major
 - Moderate
 - Low

Risk Likelihood Quantification

- Annual Probability of Occurrence
 - Up to 10%
 - 10% - 20%
 - 21% - 30%
 - 31% - 40%
 - Greater than 40%

Risk Factor Matrix Development

	Risk Factor	Impact Description	Critical = 5	Severe = 4	Major = 3	Moderate = 2	Low = 1	N/A = 0	
1	Financial	Net Income and/or Cash Flow Shortfall	Metrics developed with CFO						
2	Level of Control	Mitigation Process Maturity	Metrics developed with General Auditor						
3	Reputational (Investor and media)	Negative Media Attention; Public Criticism; Financial Forecast Shortfall	Metrics developed with SVP, Investor Relations						
4	Regulatory	Adverse action by regulatory authority.	Metrics developed with Chief Counsel & SVP, Compliance						
5	Risk Correlation	Degree to which risk correlates with other identified risks	Metrics developed by ERM team						
6	Customer Impact	Degree to which customers are impacted by risk	Metrics developed with SVPs of Sales						
7	Supplier Impact	Degree of reliance on suppliers.	Metrics developed with VP, Strategic Sourcing						
8	Employee Impact	Degree to which employees are impacted by risk	Metrics developed with CHRO						
9	Business Strategy	Degree of impact and/or change to business strategy	Metrics developed by Corporate Development team						

Sample Risk Factor Matrix

	Risk Factor	Impact Description	Critical = 5	Severe = 4	Major = 3	Moderate = 2	Low = 1	N/A = 0
1	Financial	Net Income and/or Cash Flow Shortfall	Financial Metrics in Percentages	Financial Metrics in Percentages	Financial Metrics in Percentages	Financial Metrics in Percentages	Financial Metrics in Percentages	No financial impact
2	Level of Control	Mitigation Process Maturity	>No internal control to mitigate risk	>Sole reliance on single detective control to mitigate risk	>Minimally Controlled >Control reliance placed on few key detective, manual controls	>Moderately Controlled >Control reliance placed on a mix of manual and automated detective controls	>Highly Controlled >Control reliance placed on primarily automated, preventive and detective controls.	
3	Reputational (Investor and media)	Negative Media Attention; Public Criticism; Financial Forecast Shortfall	Reputational Metrics	Reputational Metrics	Reputational Metrics	Reputational Metrics	Reputational Metrics	No reputational impact
4	Regulatory	Adverse action by regulatory authority.	Regulatory Metrics	Regulatory Metrics	Regulatory Metrics	Regulatory Metrics	Regulatory Metrics	No regulatory impact
5	Risk Correlation	Degree to which risk correlates with other identified risks	Correlated with at least one other critical risk	Correlated with at least one other severe risk	Correlated with at least one other major risk	Correlated with at least one other moderate risk	Minimal to no correlation with other identified risks	
6	Customer Impact	Degree to which customers are impacted by risk	Customer Metrics	Customer Metrics	Customer Metrics	Customer Metrics	Customer Metrics	No customer impact
7	Supplier Impact	Degree of reliance on suppliers.	Supplier Metrics	Supplier Metrics	Supplier Metrics	Supplier Metrics	Supplier Metrics	No supplier impact
8	Employee Impact	Degree to which employees are impacted by risk	Employee Metrics	Employee Metrics	Employee Metrics	Employee Metrics	Employee Metrics	No employee impact
9	Business Strategy	Degree of impact and/or change to business strategy	Business Strategy Metrics	Business Strategy Metrics	Business Strategy Metrics	Business Strategy Metrics	Business Strategy Metrics	

Sole Source Contracting Example

Risk Description

Single source or single plant manufacturers present increased risk to supply chain continuity.

Financial	Level of Control	Reputational	Regulatory	Risk Correlation	Customer	Supplier	Employee	Business Strategy	Total Impact Score	Likelihood Score
4	1	2	0	3	5	5	4	1	25	5

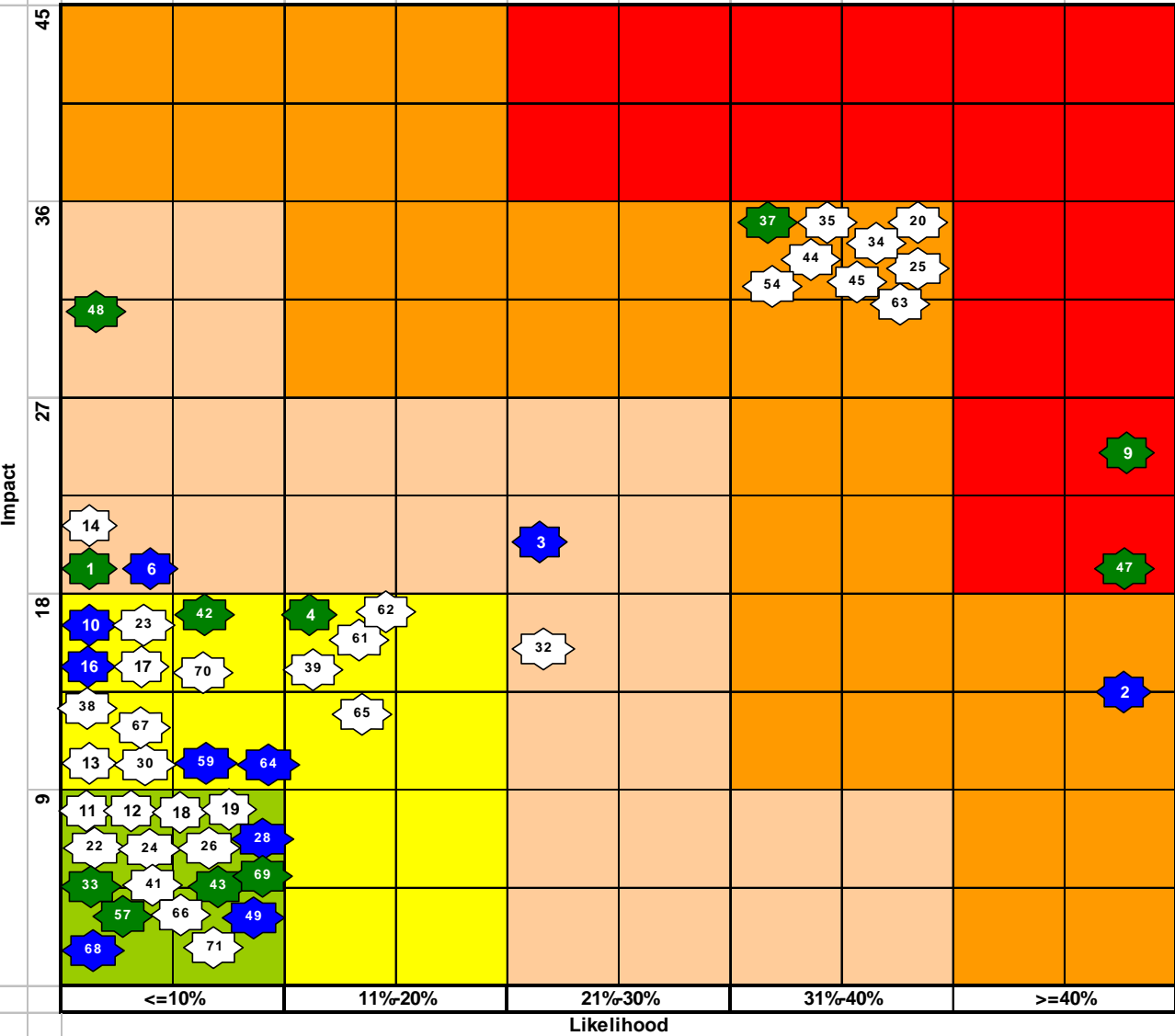
Risk Radar

- Risks plotted by impact and likelihood to determine final ranking.
- Final risk ranking will determine escalation protocol.

Risk Radar

	45					
	36					
	27					
	18					
	9					
		<=10%	11%-20%	21%-30%	31%-40%	>=40%
Impact		Likelihood				

DRAFT Risk Radar



Legend

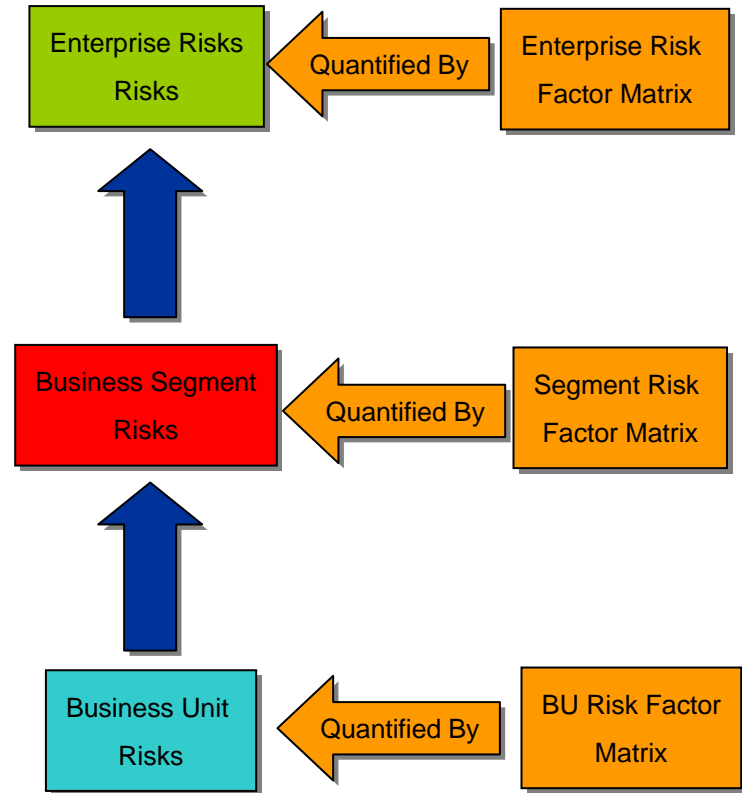
- ◆ Risk associated with Sales
- ◆ Risk associated with COGS
- Risk associated other factors

Risk Analysis

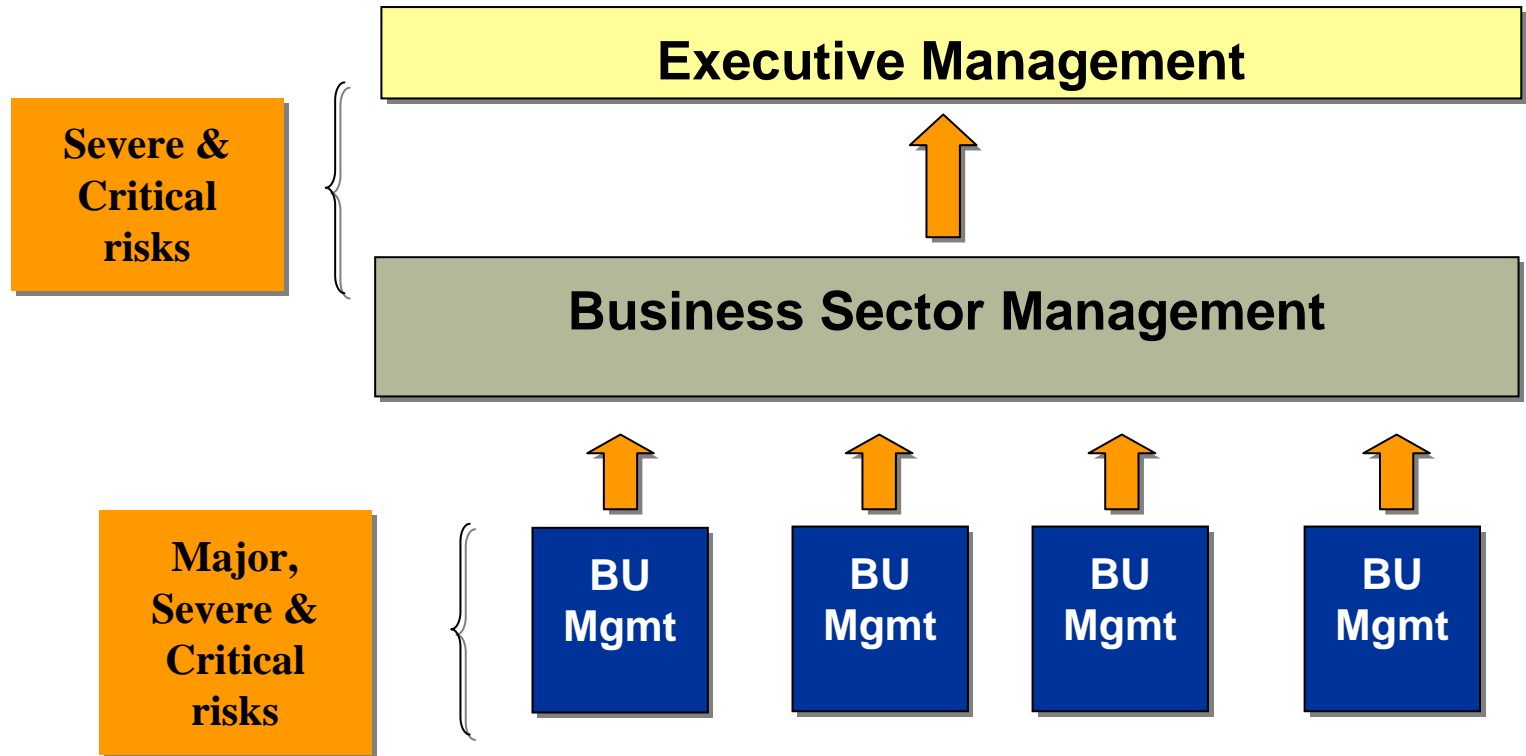
- **Analysis Should Provide Data to Answer:**
 - How much risk are we currently taking as an enterprise?
 - Risk Aggregation across business
 - Risk Correlation across business
 - Are these the “right” risks for our company?
 - Have we taken appropriate steps to mitigate risk?
 - Are we comfortable with our levels of risk given our business objectives? Available capital? Operating environment?
 - Are we earning an adequate return given the risks we are taking?

Risk Quantification & Escalation Framework

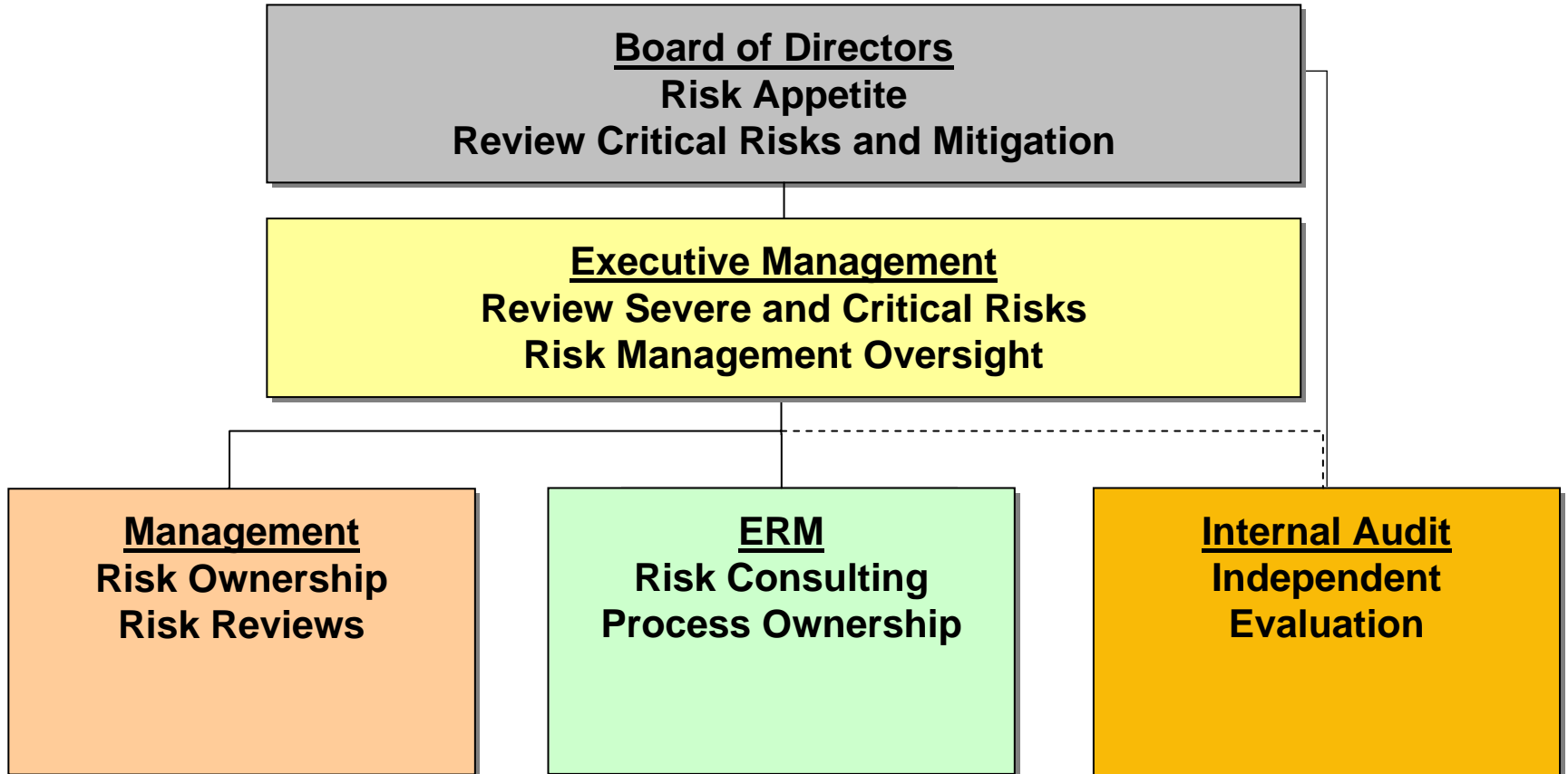
- Risks will be quantified first at the business unit level using the BU risk factor matrix.
- Critical & Severe BU risks will be elevated to the Segment Executive Committee and re-ranked using the Segment risk factor matrix.
- Critical & Severe Segment risks will be elevated to the Operating Committee and re-ranked using the Enterprise risk factor matrix.
- Critical Enterprise risks will be elevated to the Board of Directors.
- **Business Unit risks and associated mitigation are owned by BU management. Enterprise risks and associated mitigation are owned by business segment management, with oversight provided by the Operating Committee.**



ERM Risk Escalation Framework



ERM Governance Framework



Risk Mitigation

- Mitigation actions determined at BU level
- Escalated risks may receive additional capital allocation for mitigation
- Mitigation plans are incorporated into the annual strategic management agenda and individual leaders' annual performance objectives.

Risk Monitoring

- Regular risk reviews are incorporated into BU monthly leadership team meetings
- Mitigation status is monitored
- New risks can be self-identified by the business and escalated during leadership team meeting cycle
- BU Risk Radar revisited quarterly

ERM Partnerships

- Minimize resource load and eliminate duplication of effort.
 - Key Partnerships
 - Finance Risk Committee
 - Disclosure Committee
 - Treasury Risk Management
 - IT Risk Management
 - Corporate Insurance
 - Corporate Audit and SOX Compliance
 - Business Continuity & Disaster Recovery
 - Legal
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Questions?

