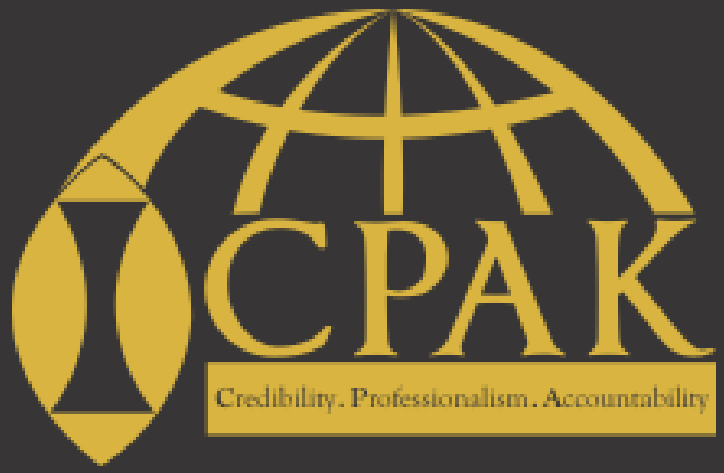
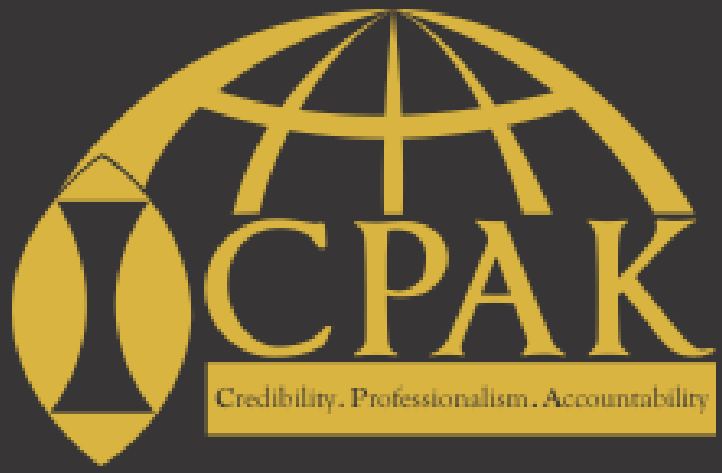


Embedding the enterprise risk management (ERM) to the core business functions to achieve successful delivery of the strategy



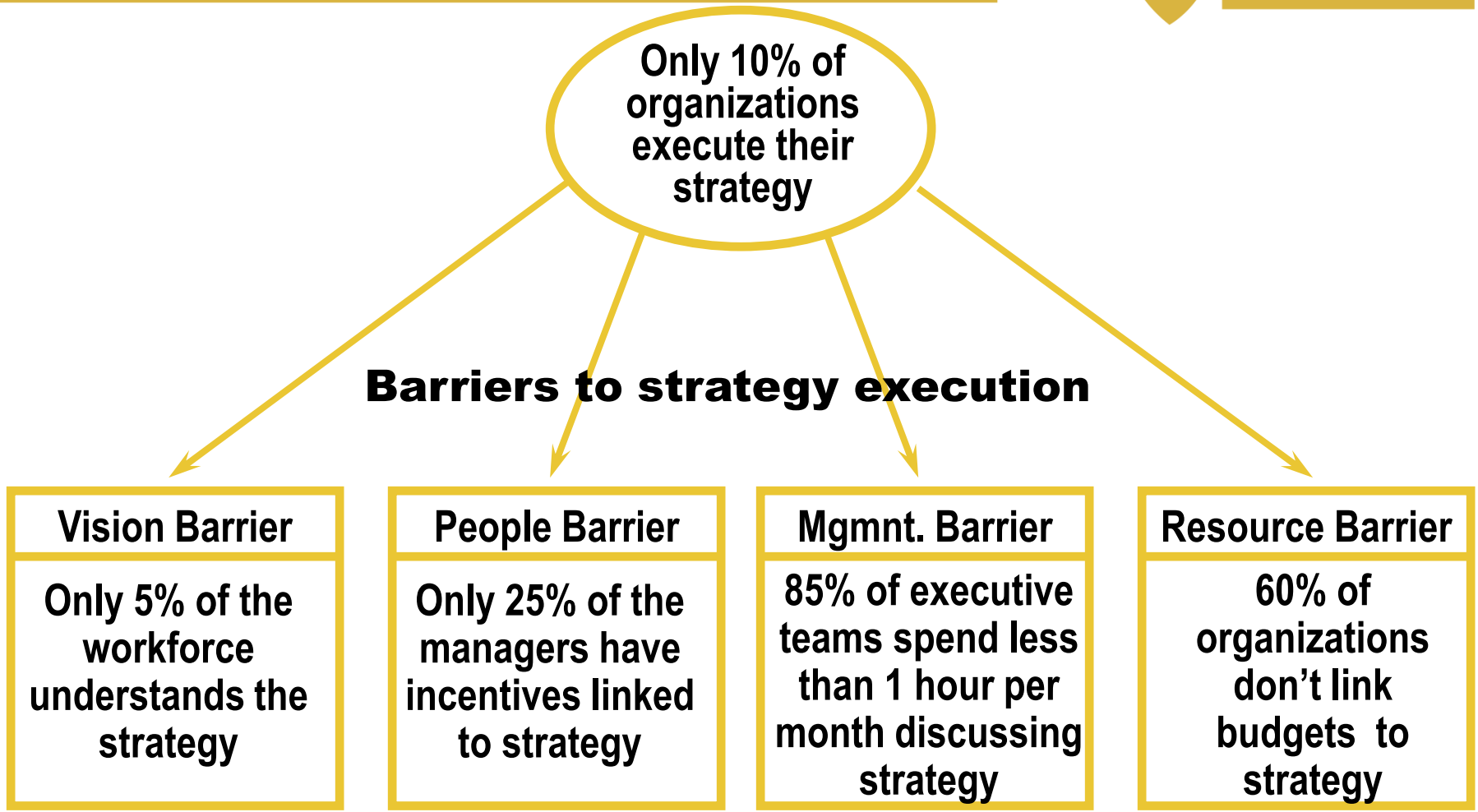
Introduction

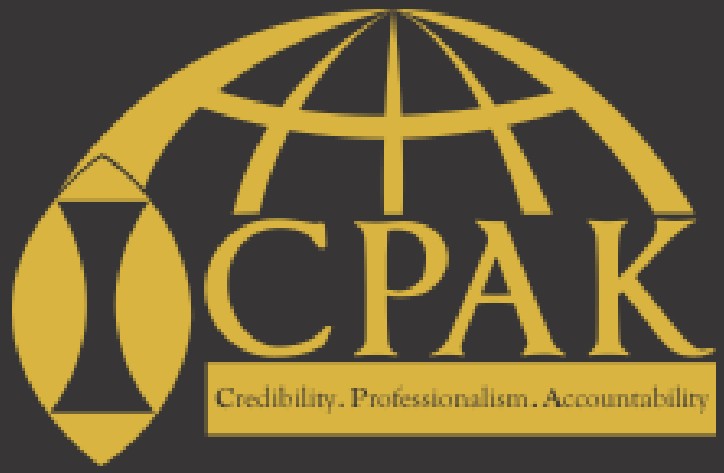
Barriers to Implementing Strategy

70% of managers' failures are due to weakness in implementing the strategy. Not for weakness in strategy it self.

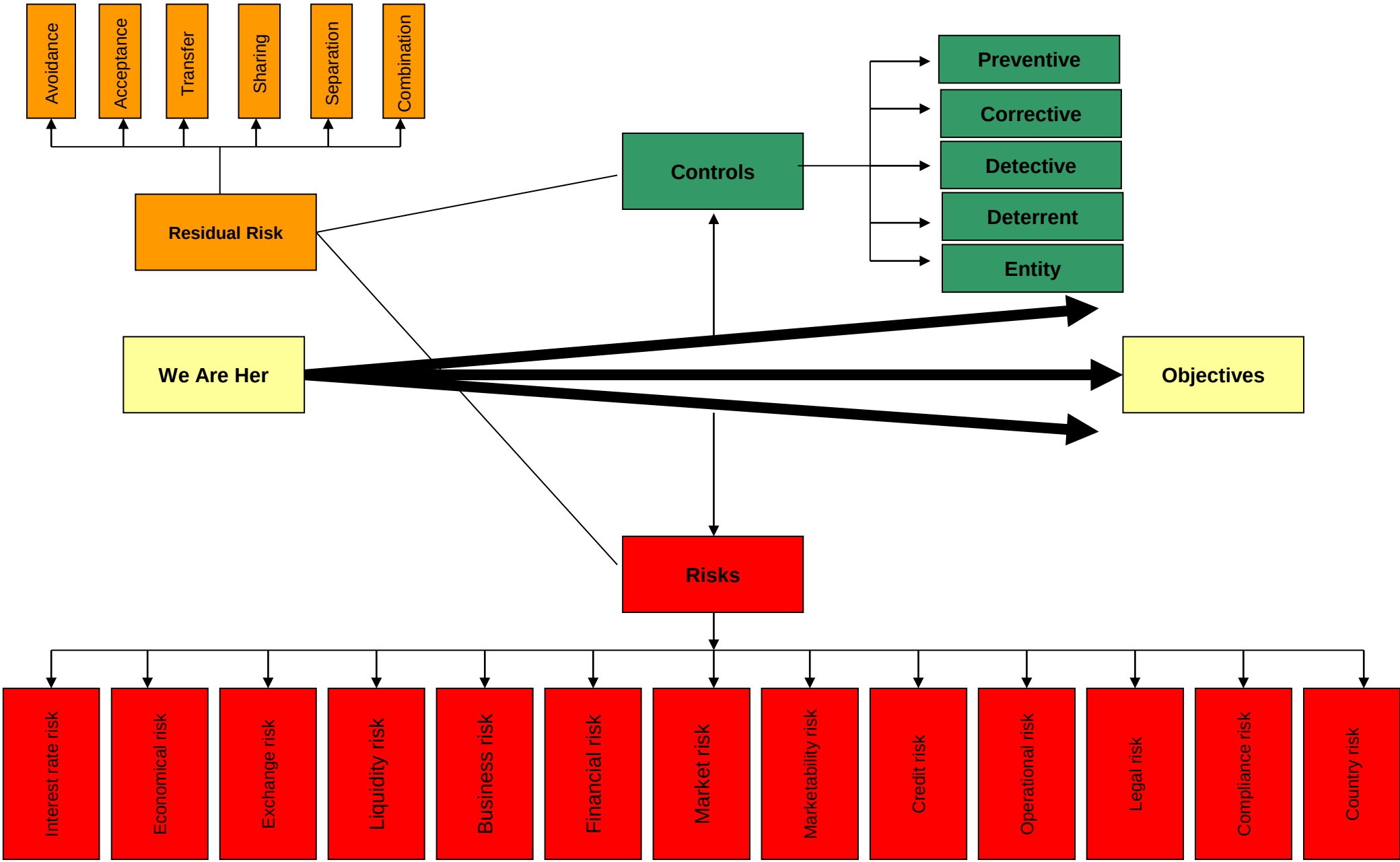
Fortune

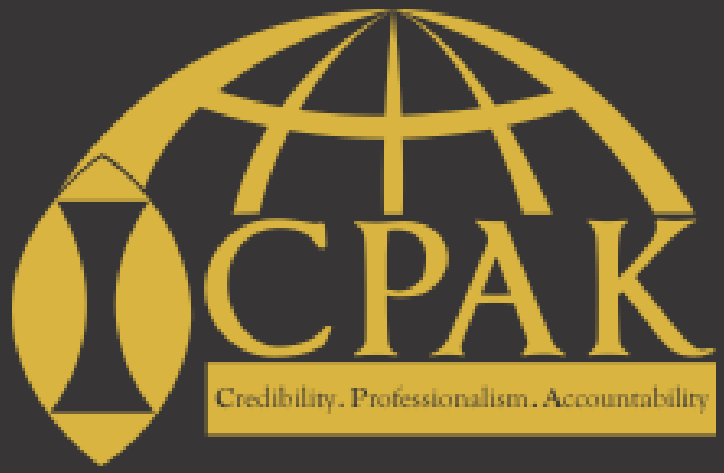
Barriers to Implementing Strategy





Introduction to Risk Management

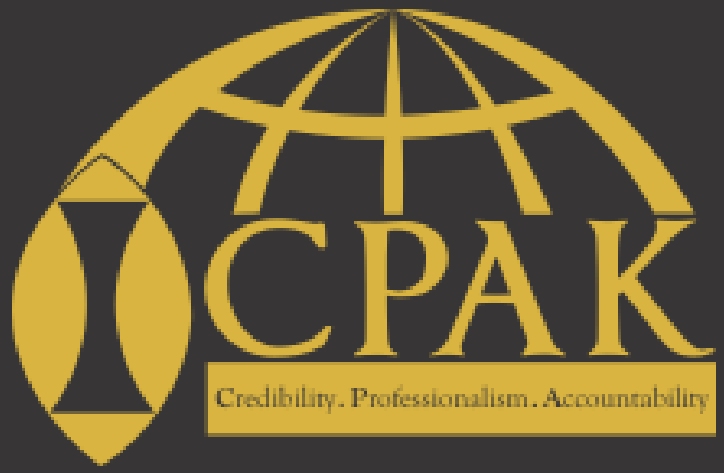

Avoidance
Acceptance
Transfer
Sharing
Separation
Combination
Residual Risk
Controls
Preventive
Corrective
Detective
Deterrent
Entity
We Are Her
Objectives
Risks
Interest rate risk
Economical risk
Exchange risk
Liquidity risk
Business risk
Financial risk
Market risk
Marketability risk
Credit risk
Operational risk
Legal risk
Compliance risk
Country risk



Risk Management Vs. ERM

Risk Management Vs. ERM

Traditional risk management	Enterprise risk management
• Considers insurable risks • Focuses risk assessments on severity • Occurs on a risk-by-risk basis • Happens within a single business unit (typically) • Tends to be reactive and sporadic • Is often myopic and disjointed • Follows a standardized routine • Focuses on avoiding or mitigating risk	• Considers risks that are (largely) uninsurable, such as mergers and acquisitions, poor customer reviews, or failure to achieve strategic goals • Assesses risks from multiple perspectives, including their relation to the company's strategic plan or mission • Takes a bird's-eye view of risks, looking at how they interrelate • Spans the enterprise • Is proactive and continual • Is a part of the company's mindset and culture • Takes a flexible, nuanced approach • Embraces risk as necessary for growth



The 20 Principles of ERM

COSO's Risk Management Framework —5 Components

- Governance and Culture
- Strategy and Objective-Setting
- Performance
- Review and Revision
- Information, Communication, and Reporting

COSO's Risk Management Framework—20 Principles

Governance & Culture

1. Exercises Board Risk Oversight
2. Establishes Operating Structures
3. Defines Desired Culture
4. Demonstrates Commitment to Core Values
5. Attracts, Develops, and Retains Capable Individuals

Strategy & Objective-Setting

6. Analyzes Business Context
7. Defines Risk Appetite
8. Evaluates Alternative Strategies
9. Formulates Business Objectives

Performance

10. Identifies Risk
11. Assesses Severity of Risk
12. Prioritizes Risks
13. Implements Risk Responses
14. Develops Portfolio View

Review & Revision

15. Assesses Substantial Change
16. Reviews Risk and Performance
17. Pursues Improvement in Enterprise Risk Management

Information, Communication, & Reporting

18. Leverages Information and Technology
19. Communicates Risk Information
20. Reports on Risk, Culture, and Performance

Governance and Culture

1. Exercise Board Risk Oversight—The board of directors provides oversight of the strategy and carries out governance responsibilities to support management in achieving strategy and business objectives.
2. Establish Operating Structures—The organization establishes operating structures in the pursuit of strategy and business objectives.
3. Define Desired Culture—The organization defines the desired behaviors that characterize the entity's desired culture.

Governance and Culture

4. Demonstrate Commitment to Core Values—The organization demonstrates a commitment to the entity's core values.

5. Attract, Develop, and Retain Capable Individuals—The organization is committed to building human capital in alignment with the strategy and business objectives.

Strategy and Objective-Setting

6. Analyze Business Context—The organization considers potential effects of business context on risk profile.
7. Define Risk Appetite—The organization defines risk appetite in the context of creating, preserving, and realizing value.
8. Evaluate Alternative Strategies—The organization evaluates alternative strategies and potential impact on risk profile.
9. Formulate Business Objectives—The organization considers risk while establishing the business objectives at various levels that align and support strategy.

Risk and Performance

10. Identify Risk—The organization identifies risk that impacts the performance of strategy and business objectives.
11. Assess Severity of Risk—The organization assesses the severity of risk.
12. Prioritize Risks—The organization prioritizes risks as a basis for selecting responses to risks.
13. Implement Risk Responses—The organization identifies and selects risk responses.
14. Develop Portfolio View—The organization develops and evaluates a portfolio view of risk.

Review and Revision

15. Assess Substantial Change—The organization identifies and assesses changes that may substantially affect strategy and business objectives.
16. Review Risk and Performance—The organization reviews entity performance and considers risk.
17. Pursue Improvement in Enterprise Risk Management—The organization pursues improvement of enterprise risk management.

Information, Communicating, and Reporting

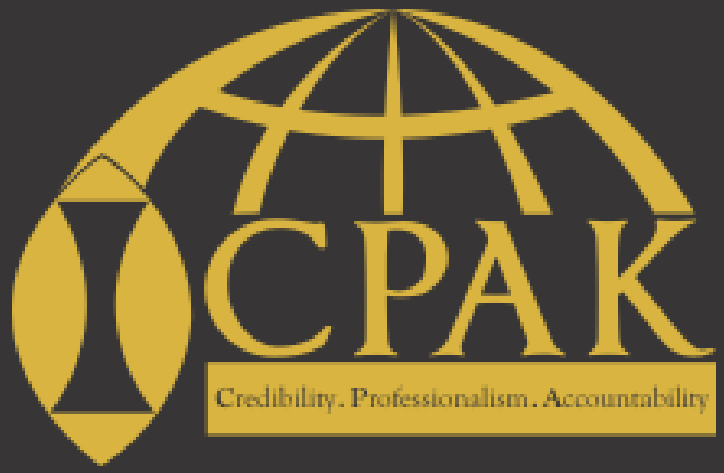
18. Leverage Information Systems—The organization leverages the entity's information and technology systems to support enterprise risk management.

19. Communicate Risk Information—The organization uses communication channels to support enterprise risk management.

20. Report on Risk, Culture, and Performance—The organization reports on risk, culture, and performance at multiple levels and across the entity.

ERM Assessment—Must Assess Capacity to Manage Risk

- Assessment may be voluntary or required
- Assure that (5) components and (20) principles are functioning
- Assure that components and principles are fully integrated
- Assure that controls needed to achieve the principles are functioning



Practical Steps for Starting an Enterprise Risk Management Initiative

Beginning the Process of Integrating ERM

- Key: Start by adding ERM to existing governance activities; don't start with new processes and activities.
- Example: Start with budget process. Simple path: Add one page to the existing budgeting process to describe:
- **Risks:** Events that may impair unit's ability to achieve budget objectives
- **Actions:** Activities to monitor and manage the identified events

Beginning the Process of Integrating ERM

Check list to Implement Enterprise Risk Management

Check List to implement ERM

The Institute and Faculty of Actuaries recommends that its members take the following steps before implementing an ERM framework:

Check List to implement ERM

1. **Study existing risk practices.**

Perform a quick assessment of your organization's approach to risk, asking questions such as these. If you answer "no" to three or more of these questions, you will want to correct any deficiencies and self-assess again before implementing your ERM framework.

Check List to implement ERM

- Does your organization think deeply and broadly enough about uncertainty and take steps to manage it proactively and systematically?
- Is your enterprise using holistic analyses of uncertainty to influence strategy and business development?
- Are you sure that all the most significant threats and opportunities facing your business are being managed effectively?
- Are you confident that your business could survive major external changes?
- Does your board make enough time for understanding risk?

Check List to implement ERM

- Does your board give good risk leadership to the organization?
- Do you have an effective central risk function which attempts to "see the whole picture of risk"?
- Is there an adequate system for spotting emerging threats and opportunities in time?
- Is there clear and regular communication about risks throughout the organization, within an appropriate-risk-aware culture, covering both threats and opportunities?
- Is your system of risk governance good enough?

•Conduct a comprehensive survey of your organizational risk practices.

•Prioritize which parts of your enterprise and which risk practices you should improve first to enhance your risk management program.

Check List to implement ERM

2. **Construct a vision of future risk management.**

- Develop a vision for how the organization will look different once ERM has been introduced, including an evaluation of the benefits it will bring.
- Determine which changes are needed to achieve the vision, including any changes necessary to improve the quality or timeliness of the flow of data within the organization.

Check List to implement ERM

3. **Plan the implementation and seek authorization.**

- Set out in detail the steps you'll need to take to achieve these changes, including, possibly:
  - Widen the board's experience, if needed, by appointing nonexecutive directors from outside the industry.
  - Ensure that all board members are fully briefed on ERM concepts.
  - Allocate regular time at board meetings for ERM and the supervision of your principal strategic risks.
  - Introduce whichever changes are necessary in culture and communications to increase risk awareness.
  - Set up a central risk function (or strengthen an existing one), appoint a leader, assign its tasks, and put it to work.

Check List to implement ERM

- Adjust your organization's structure so that your risk function shares ERM conclusions with your corporate strategy and business development departments, with a view to making the business more robust and flexible.
- Improve the methods used for managing risks. Set up systems for developing responses to risks, using a methodical but imaginative and creative approach.
- Establish monitoring systems that focus on risks for which you have not developed an adequate response.

Check List to implement ERM

- Review, and improve where necessary, your enterprise's methods for managing strategic, project and operational risks.
- Establish criteria for determining when project and operational risks become strategic risks that could have a significant impact on the business.
- Study risks that are already embedded in the organization.

Check List to implement ERM

- Establish a timetable for setting up a central risk function (or strengthening the existing one) and determine its tasks and reporting lines.
- Establish schedules for other parts of your ERM plan and who will be responsible for achieving them, with clear milestones.
- Determine how everyone is to be trained to new ways of thinking, behaving and communicating, and make realistic estimates of how long this is likely to take and how much it will cost.
- Make realistic estimates of the costs of the implementation project.

Check List to implement ERM

- Identify the risks associated with implementing your ERM framework, and use a recognized methodology such as Risk Analysis and Management for Projects (RAMP) to appraise and control them.
- Ensure that the implementation project has full buy-in from the board and the CEO.
- Appoint suitably skilled senior people to lead the implementation process, including a project manager.
- Set up a governance structure for the implementation project.
- Improve reporting systems, so that up-to-date and consistent data is available to all those who control risks.
- Introduce horizon scanning for emerging risks.

Check List to implement ERM

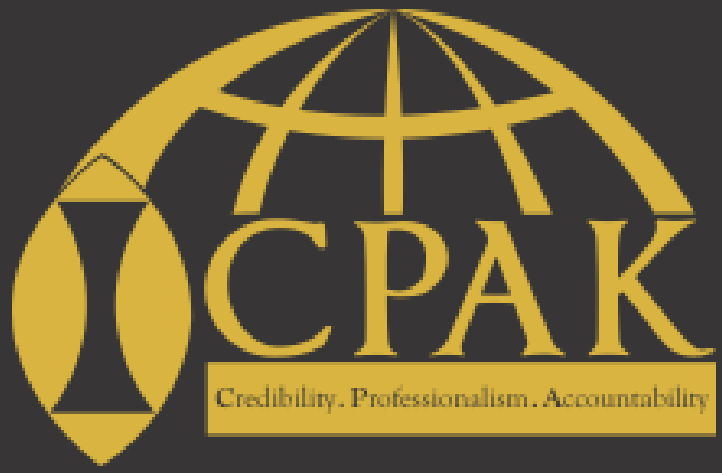
- Clarify the responsibilities and ownership of all managers on risk issues.
- Overhaul risk governance systems and ensure that they are properly developed and implemented.
- Begin embedding risk management within the general management of the organization, so that it becomes part of every manager's way of life.
- Ensure that you have procedures in place for risk analysis of all major change initiatives before they proceed.
- Set up a crisis management system.

Check List to implement ERM

- Have better and more frequent discussions with suppliers and customers about emerging risks.
- After you've gotten your ERM program humming along, you'll need to follow up with continuous monitoring to ensure that all systems are always "go."
- Ironically, implementing your ERM framework and program can expose your organization to new risks—as is the case with any significant change. Here are some tips for success:

Check List to implement ERM

1. Get not only buy-in, but leadership from the top.
2. Monitor the implementation closely at every step.
3. Consult with managers and other key personnel about the design of important changes and to review the implementation's progress.
4. Survey employees regularly about the implementation.
5. Be aware of threats to the implementation project including:
    a. Rising costs
    b. Increases in implementation time
    c. Distractions from the business's operations
    d. Doubts about the value of ERM



Risk Management Maturity Model

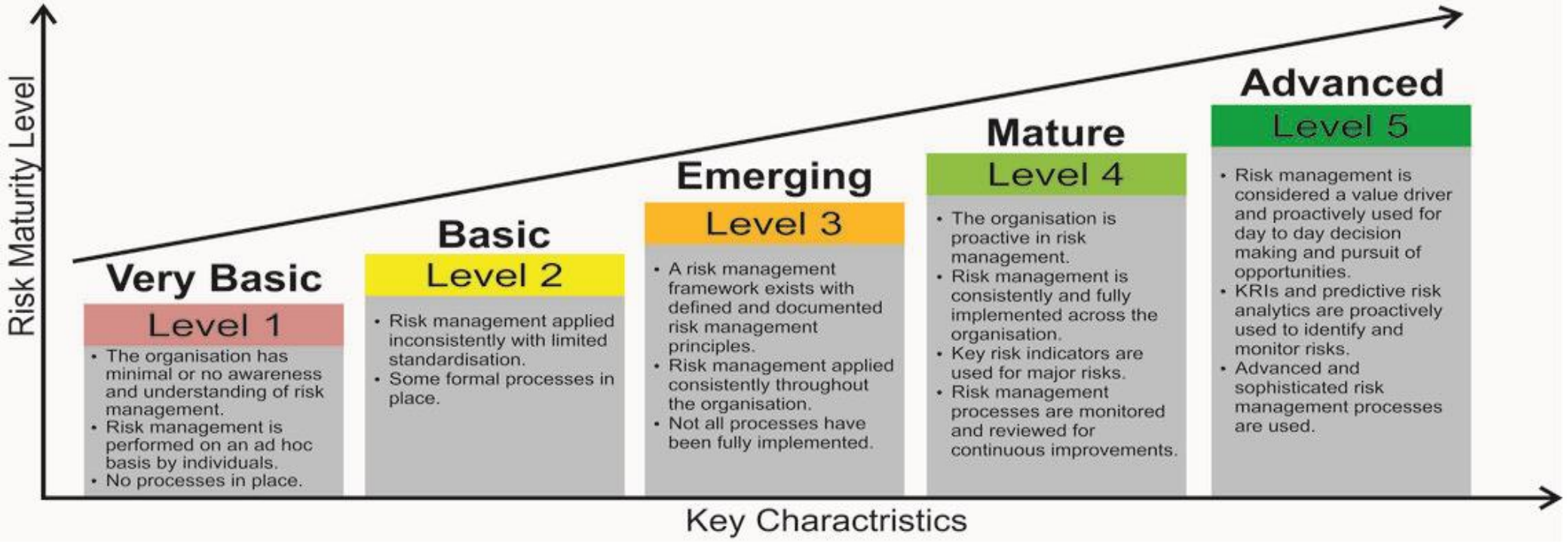
Risk Management Maturity Model

Role	Operational Risk Management Process Steps		Result
Process owners & their teams	1	Identify	Discover unidentified risks and opportunities
Process owners & their teams	2	Assess	Benchmark risk and performance for core process areas
Process owners & Risk Committee	3	Evaluate	Approve allocation of resources for mitigation planning
Process owners & business analysts	4	Mitigate	Approve allocation of funds to the highest risk/performance areas
Process owners & project team	5	Monitor	Regular reporting to track results and status

Risk Management Maturity Model

Investors in Risk Management (IIRM)

RISK MANAGEMENT MATURITY MODEL



The seven key attributes of effective ERM

To determine your maturity level, the model identifies seven key attributes of effective ERM:

1. **Having an ERM-based process:** How embedded is risk management in your company's culture? Do your C-suite and board support ERM?

2. **Managing your ERM process:** How have you instilled an ERM mindset and methodologies throughout your culture and in your business decisions? Does your risk management program use best practices when identifying, assessing, evaluating, mitigating, and monitoring risks?

The seven key attributes of effective ERM

3. **Managing your risk appetite:** How aware are your leaders of the tradeoffs between risk and rewards? Does everyone understand who's accountable for risk and what your organization's risk tolerances are? How effective is the enterprise at stopping risks from becoming threats?

4. **Finding the root cause:** How well do you identify the source of risks (root cause) rather than just their symptoms and outcomes? Have you classified your risks according to their root causes?

The seven key attributes of effective ERM

5. **Uncovering risks:** How well and thoroughly have you assessed the risks to your organization? How do you gather information about risks? What is your risk assessment process? Do you examine risk information for trends?

6. **Managing performance:** To what degree do you follow your enterprise visions and strategies? Do you use a risk-based process to plan, communicate, and measure your organization's core goals?

7. **Keeping the business resilient and sustainable:** Do you use a risk-based methodology to plan operations, manage business continuity, and sustain critical business functions?