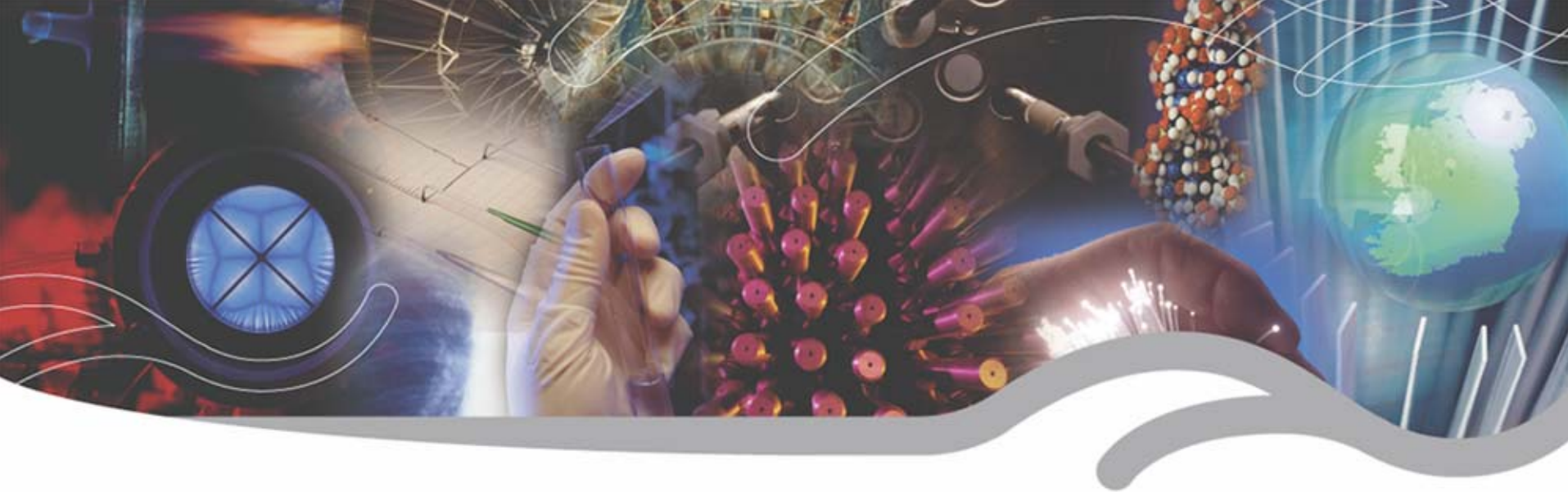

Risk Assessment Management on an Organizational Level

Presentation for International Workshop on Accountability in Science Funding, 1 June 2006

Laura Cavanaugh
SFI Head of Internal Audit

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Session Objectives

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1. Introduction – SFI
2. What is risk management?
3. Why is risk management important?
4. What is the role of internal audit in risk management?
5. SFI Experience – 2004 to 2006
6. Final Observations

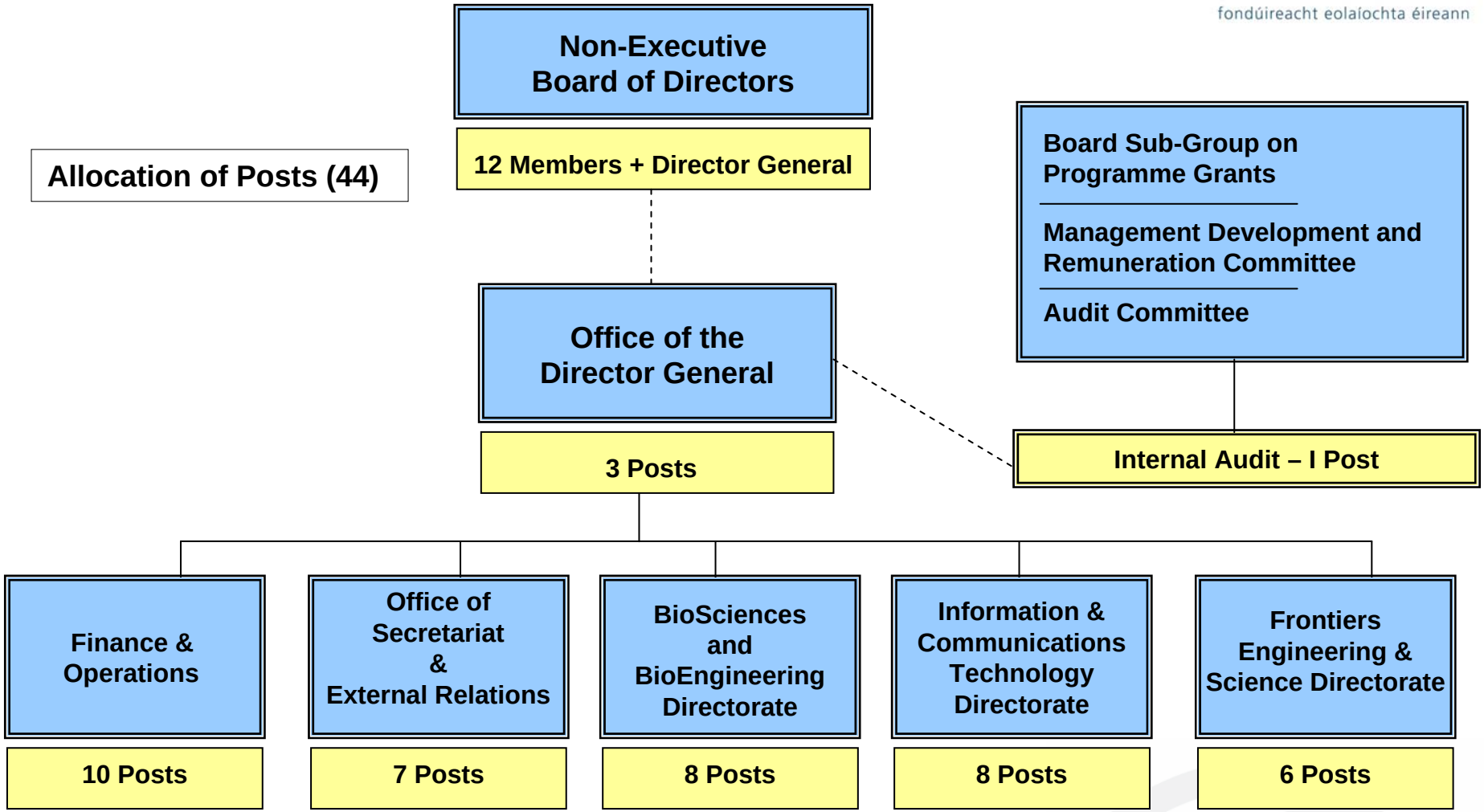
Introduction

Science Foundation Ireland

Establishment of SFI

- **Technology Foresight Study - 1998**
- **SFI established - 2000**
  - Focus on Biotechnology & ICT
  - Sub-board of Forfás (National Policy Board for Enterprise, Trade, Science, Technology & Engineering)
- **SFI announces 1st 10 awards - 2001**
- **SFI established as Irish State body - 2003**

SFI Structure



SFI Award Programmes

- **Annual budget - approximately €150M**
- **Over 10 award programmes including:**
  - **Principal Investigators**
  - **Centres for Science, Engineering & Technology**
  - **Research Frontiers Programme**
  - **Women in Science & Engineering**
  - **Supplemental awards, such as:**
    - **Undergraduate Research Experience & Knowledge Award (UREKA)**
    - **Secondary Teacher Assistant Researchers (STARs)**

What is risk management?

Defining Risk Management

A process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risks to be within its risk appetite, or provide reasonable assurance regarding the achievement of entity objectives.

COSO Enterprise-Wide Risk Management Framework

A process to identify, assess, manage and control potential events or situations, to provide reasonable assurance regarding the achievement of the organization's objectives.

Institute of Internal Auditors – UK & Ireland, International Standards for the Professional Practice of Internal Auditing

Defining Risk Management

Normal Management Activity

Corporate Governance Requirement

Not Rocket Science!

RISK MANAGEMENT PROCESS

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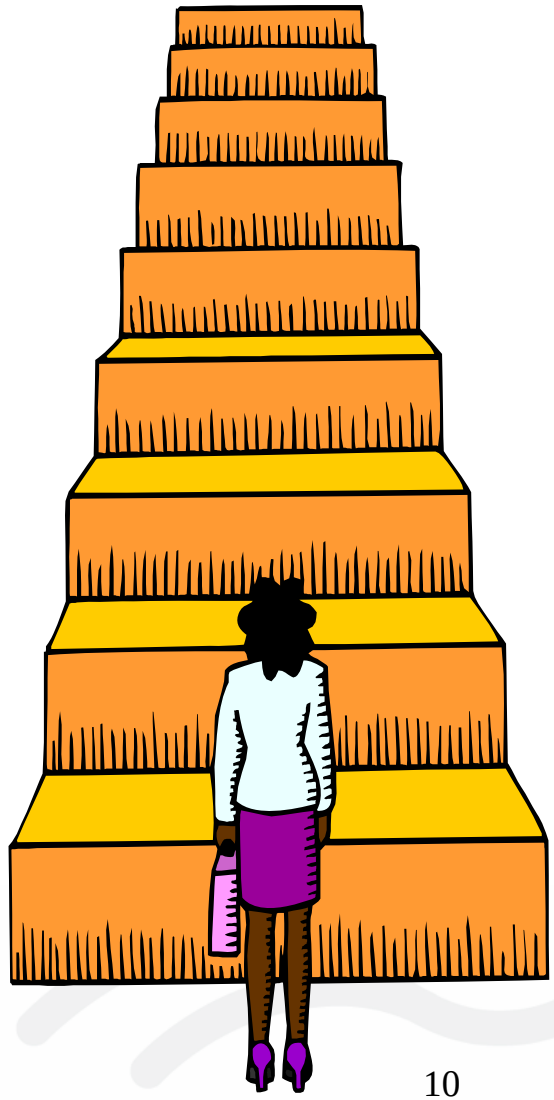


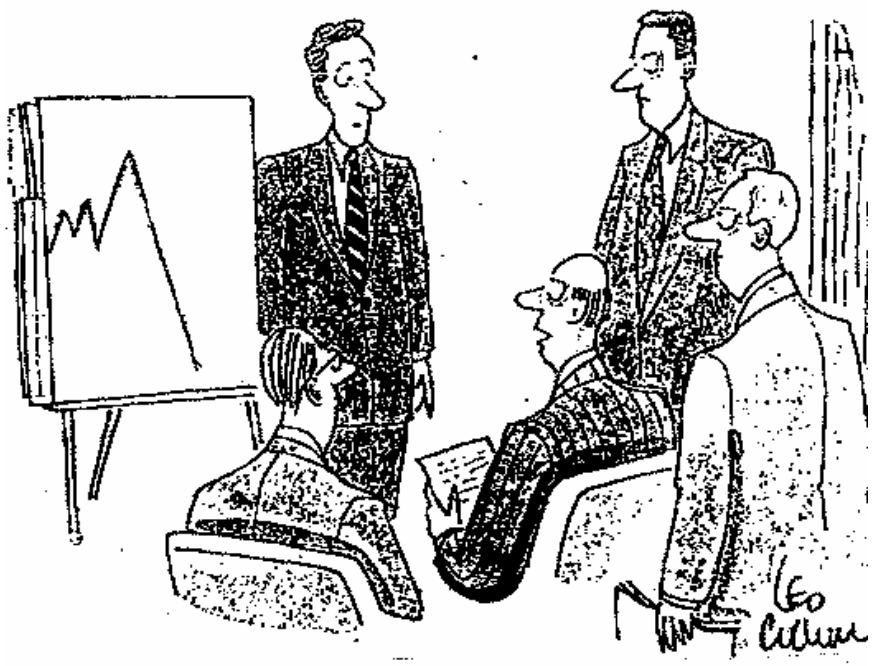
Why is risk management important?

Corporate Governance Standards

Irish / UK Listed Companies
Turnbull Guidance 1999

Irish State Bodies
Code of Practice 2001

Irish Government Departments
Report on the Working Group on the Accountability of Secretaries General and Accounting Officers, January 2003 ("Mullarkey Report")



"Would you please elaborate on 'Then something bad happened'."

Disclose process used to identify business risks
Provide assurance to key stakeholders

Making the Case for Risk Management

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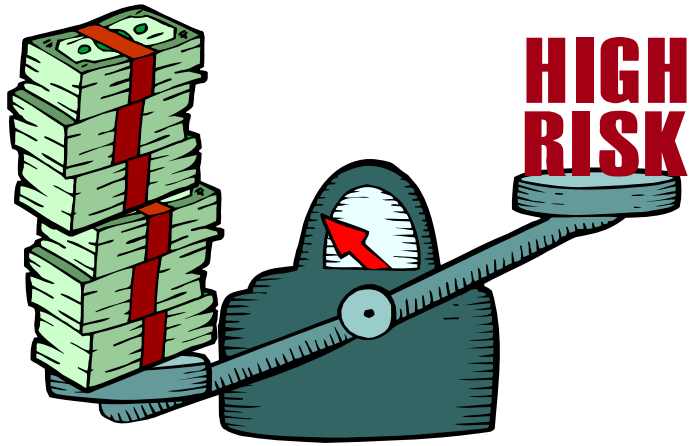
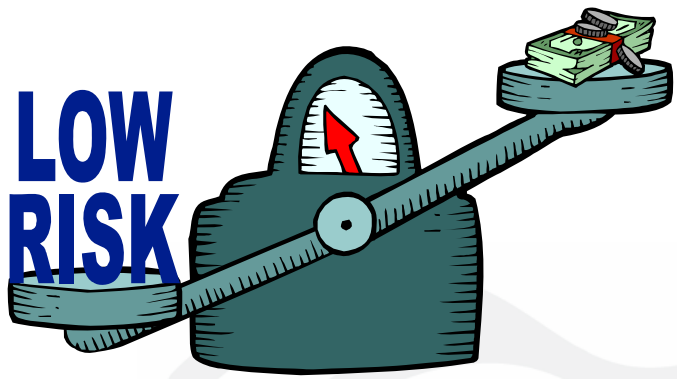
Reward for effective risk-taking = success in achieving goals

Objective to manage risk, not to eliminate risk

Improve decision-making & resource allocation

Assurance to senior management & Board of Directors





Freedom of Information Act

- **Freedom of Information Act, 1997 & Freedom of Information (Amendment) Act, 2003**

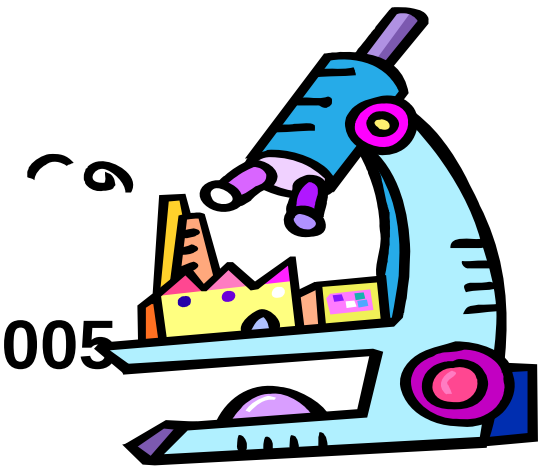
- **Public interest in access to information**
  - **Presumption in favor of disclosure**
  - **Balance public interest & potential harm caused by disclosure**

What is the role of internal audit in risk management?

Internal Audit at SFI

State bodies must have a properly constituted internal audit function or engage appropriate external expertise

Code of Practice for the Governance of State Bodies, October 2001 ("Code of Practice")



Outsourced – 2003 to 2004

Appointed in-house internal auditor - 2005

- Internal audits of SFI operations
- External audits of SFI-funded research programmes

The Role of Internal Audit

IIA – UK & Ireland, Code of Ethics & International Standards

Internal auditing is:

"An independent, objective assurance and consulting activity designed to add value and improve an organisation's operations. It helps an organisation accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes."

The Role of Internal Audit

IIA – UK & Ireland, Position Statement
The Role of Internal Audit in Enterprise-Wide Risk Management

- **Value of independent internal audit function**
- **No assumption of management responsibility**
- **Extent of participation will depend on risk maturity of organization**
    - **To what extent has a robust risk management approach been adopted and applied by management?**

Risk Maturity

IIA – UK & Ireland, Position Statement, Risk-Based Internal Auditing

Risk Maturity	Key Characteristics	Internal Audit Approach
Risk Naïve	No formal approach developed for risk	Promote risk management and rely ssment
Risk Aware		-wide approach t and rely on ent
Risk Defined		gement/liaise ent and use ssment of risk
Risk Manage		ment processes ent assessment propriate.
Risk Enabled	Risk an internal control fully em ed into the operations.	Audit risk management processes and use management assessment of risks as appropriate.

"Never send an auditor in to do a risk workshop."

"Imagine an auditor going and saying, 'Tell me all your problems, the things you are doing wrong.'"

Bill Connelly, Chair of the Professional Accountants in Business Committee of the IFAC, as quoted in "Strength through independence", in Internal Auditing & Business Risk, Vol. 30, Issue 5, May 2006

Relation To Internal Audit Plan

Considerations:

- **Blind spots**
- **“Audit-ability” of identified risks**
- **Financial focus of internal audit**

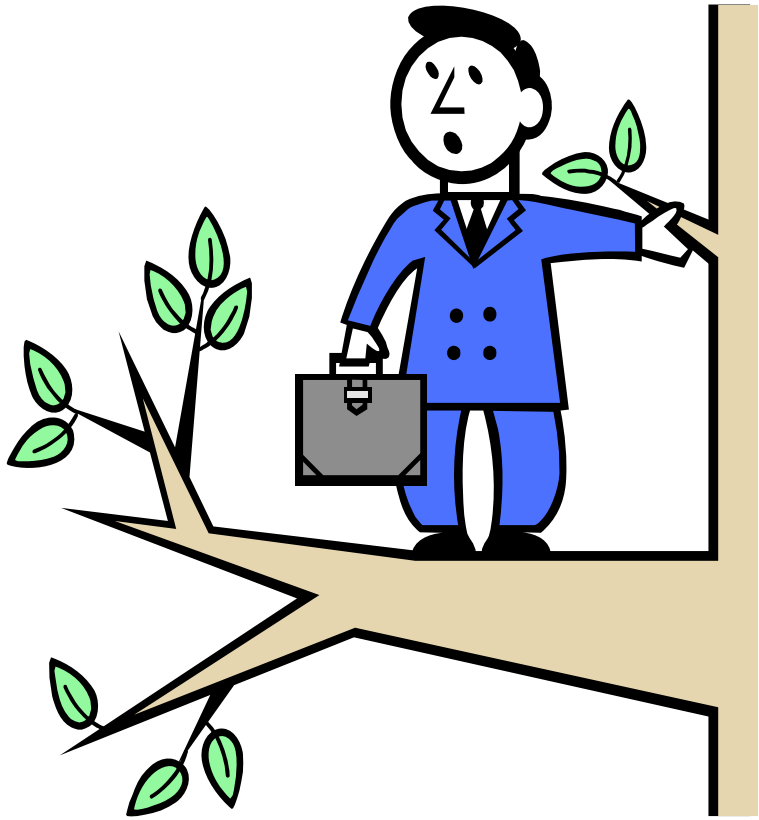
Risk management at SFI

2004 to 2006

Introducing the Process - 2004

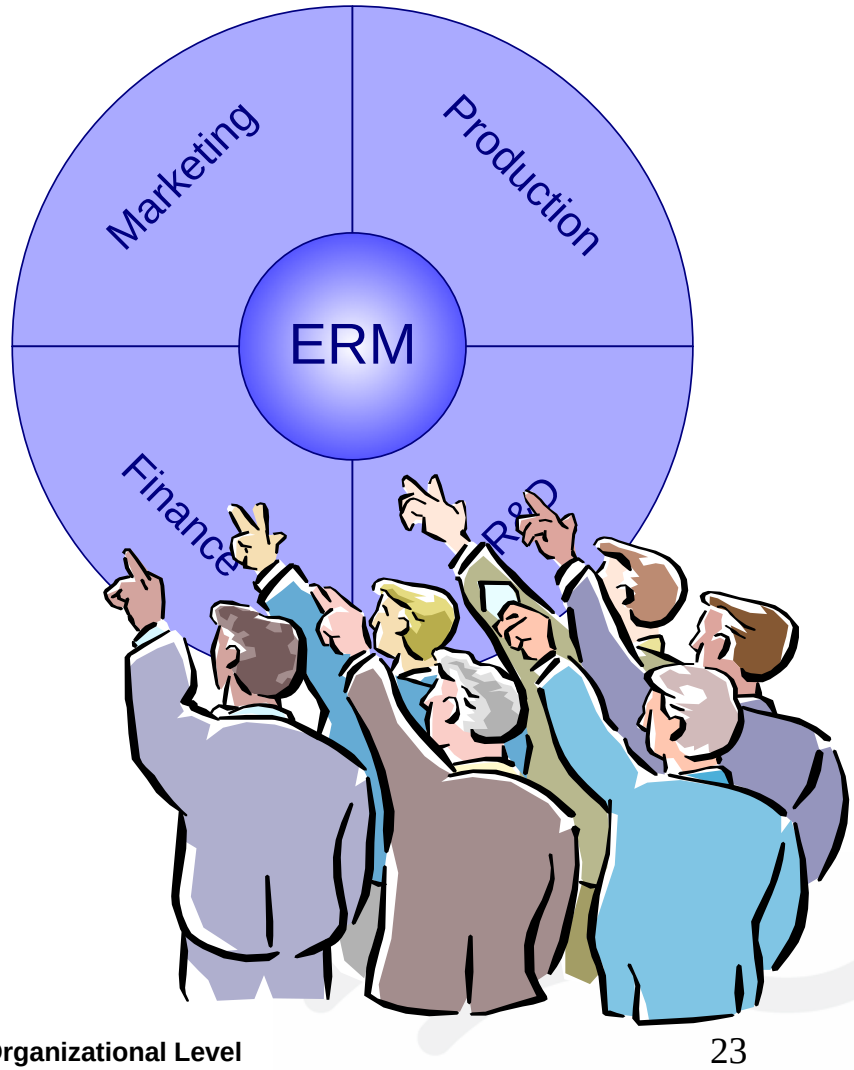
- External consultant
- Electronic voting & risk map
- Report to management & Board
- Management of key risks

Embedded in business systems?



Development of Process - 2005

- **External consultant**
- **“Low-tech” approach**
- **Directorate-level teams met to:**
  - **Consider SFI objectives**
  - **Identify risks**
  - **Rank impact & likelihood**
  - **Decide how to manage risks**



Development of Process - 2005

Key Concepts

Inherent Risk – Estimate severity of impact and likelihood of occurrence, assuming **no risk management** is in place

Residual Risk – Acceptable level of risks, considering management actions, based on **risk appetite** of organization

Risk Appetite – The **level of risk** that is acceptable to the board or to management

Development Of Process - 2005

INHERENT RISKS, RANKING IF UNMANAGED				RISK MANAGEMENT ACTIONS		RESIDUAL RISK		
Risk Type	Description	Likelihood	Impact	Management Method	How Done	Likelihood	Impact	Within Tolerance
		Why						
Strategic Operational Financial Reputation		4	4	Reduce Likelihood & Impact Avoid Transfer Reduce Accept	Describe Current Risk Management Actions	1	1	Y

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Tierney & Associates, Risk & Governance Consultants

Results - 2005

- **Foundation-wide participation & good input!**
- **Over 30 risks identified with 6 key risks**
- **Wide range of issues:**
  - **Strategic** – government commitment
  - **Financial** – budget management & grant administration
  - **Operational** – policy processes & human capital
- **Reflects "start-up" phase of SFI and recent increase in scale of research funding in Ireland?**

Current Status & Future Plans

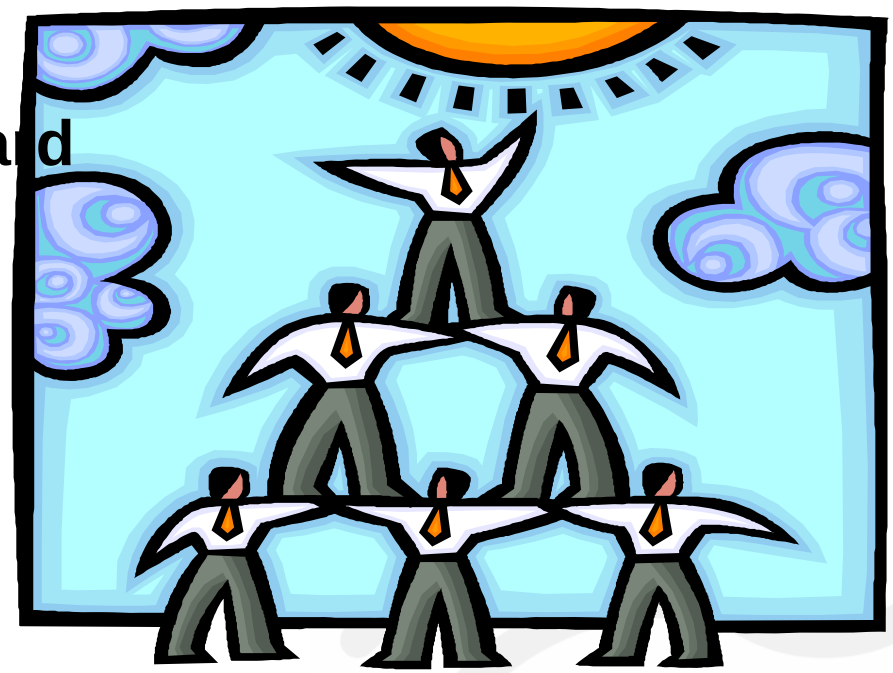
☒ Finalize risk register

☒ Process driven by Office of Secretariat / Manager, Secretariat

❑ Establish risk committee = management + staff members

❑ Monitor indicators of risks

❑ Report to management & Board



Final Observations

- Identification of performance indicators
- Buy-in by management & staff members
  - Avoid jargon!
- Appropriate approach for organization
- Timeliness and visibility of results
- Embedding risk management…..

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Q&A