Photo credit: Teddy Kelley (Stocksnap.io)

Enterprise Risk Management
January 23, 2017

Agenda

- Risk
- Enterprise Risk Management (ERM) & Benefits
- Proposed ERM Framework
- ERM Advisory Team's Objectives
- Implementation Steps
- ERM @ Mines - Survey
- Next Steps
- Planned Milestones

Risks

Risks are EVERYWHERE in many forms

- ❖ Operational risk
- ❖ Strategic risk
- ❖ Stakeholder risk
- ❖ Compliance risk
- ❖ Reputational risk
- ❖ Financial risk
- ❖ Health and safety risk
- ❖ Cyber risks

Photo credit: Laine Metzler (Stocksnap.io)

Optimal Risk-Taking Yields Maximum Value

Not Enough Risk-Taking

Excessive Risk-Taking

Expected Enterprise Value

Optimized Risk Taking

Risk Level
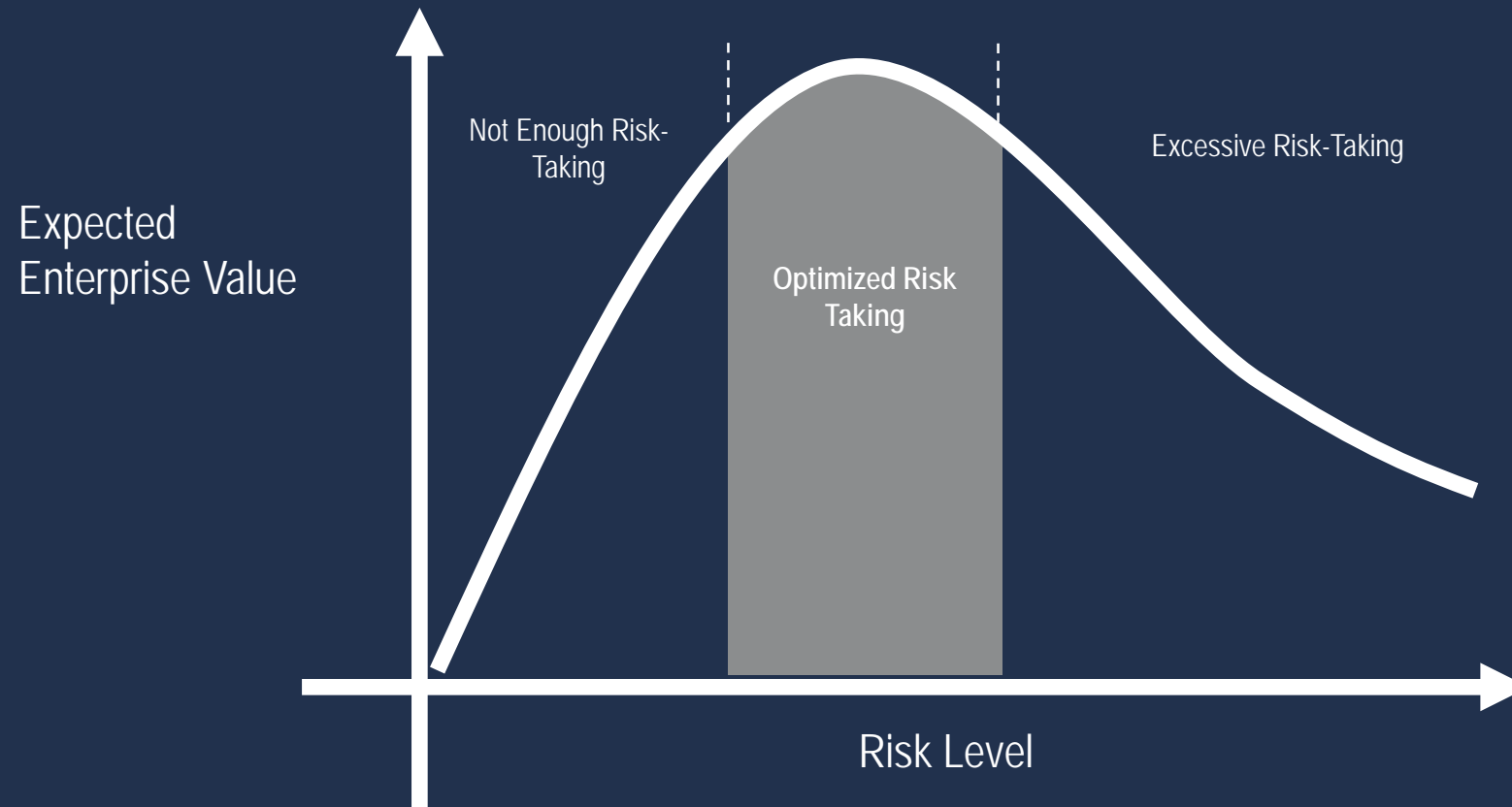
Enterprise Risk Management

"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, manage risk to be within its risk appetite, to provide <u>*reasonable*</u> *assurance regarding the achievement of entity objectives."*
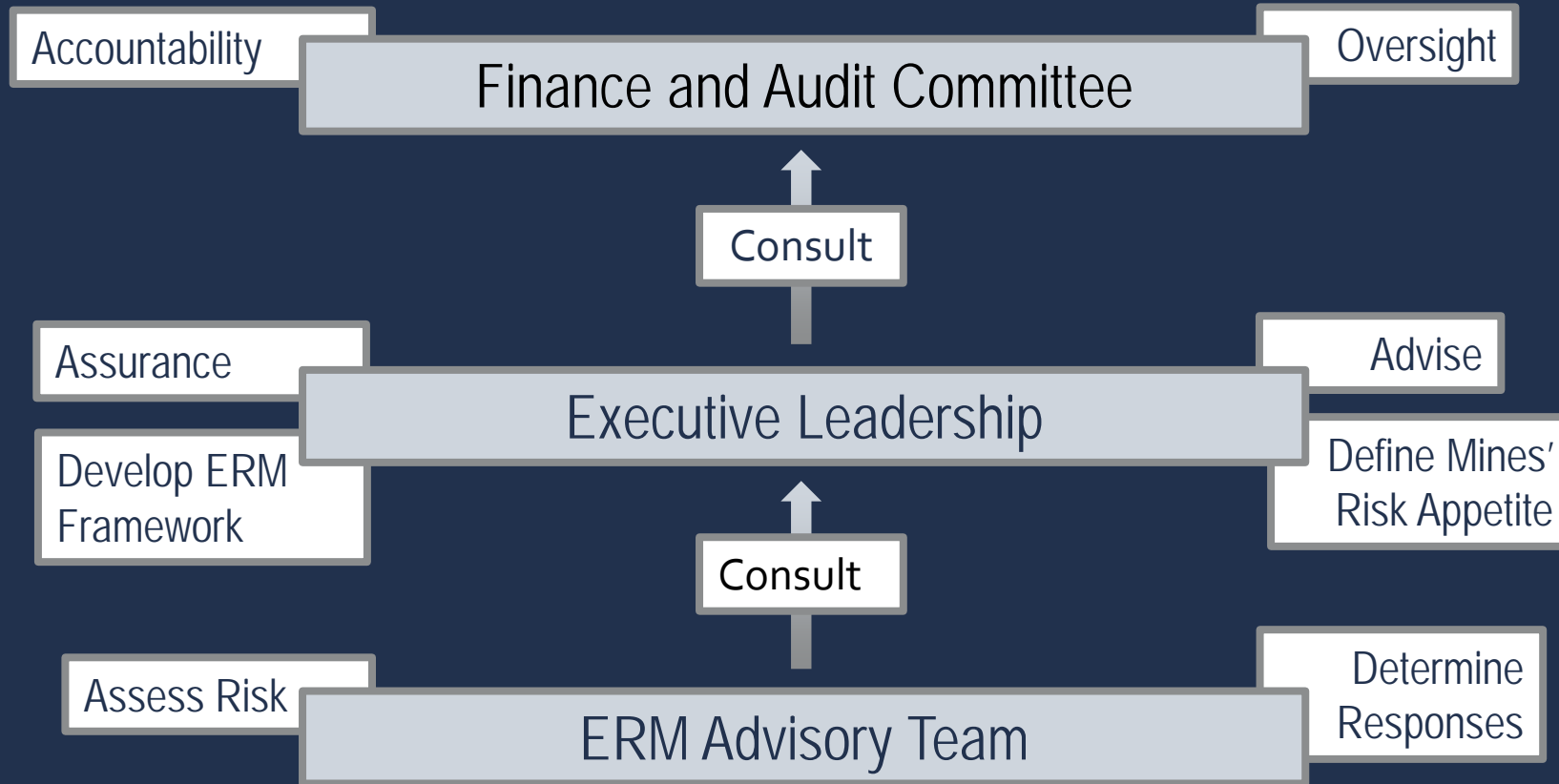
-- Committee of Sponsoring Organizations of the Treadway Commission

Source Credit: Revised COSO ERM Framework (2016)

BENEFITS OF IMPLEMENTING ERM

- Holistic and cohesive system aimed at achieving Mines' objectives

- Enhance decision making and purposeful resource allocation

- Helps management make informed decisions regarding risk

- Fosters collaboration through an organization-wide risk language

- Break down barriers between departments and support beneficial change

- Improve understanding of the interrelated impacts of risk at Mines

PROPOSED ERM FRAMEWORK

| Accountability | **Finance and Audit Committee** | Oversight |

Consult

| Assurance | **Executive Leadership** | Advise |

| Develop ERM Framework | | Define Mines' Risk Appetite |

Consult

| Assess Risk | **ERM Advisory Team** | Determine Responses |

Advisory Team Objectives

Ensure an effective means to identify risk throughout Mines

Define levels of acceptable risk to take

Manage identified risks with adjustments for sustainability

Take acceptable risks to create value

Maximize enterprise profits

Reduce loss associated with risk

ERM Implementation Steps

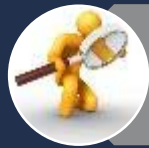Define Risk and Decide What is Acceptable Risk to Take

Define System to Identify, Assess, and Manage Risk

Train Core Teams in Each Department

Core Team Assess and Respond to Identified Risks

Provide Oversight of Smaller Teams and Monitor Decision Making

Further Improve System With Time Through Dynamic Evaluation

ERM Survey Key Highlights

Purpose: Gain an understanding of how risk management occurs at Mines

- 16 participants
- 3 areas: Academic Departments, A&O, and Student Life
- 7 Questions:
    1. On a scale from 1 (risk averse) to 5 (risk taker), how would you define Mines risk appetite?
    2. Is there a common meaning of risk across campus? In the box below, please articulate how you define risk?
    3. What risk information is generated in your area and by whom? How is it acted upon?
    4. What emerging external risks do you monitor?
    5. Would you or your department/unit be willing to participate in a cross-department committee review of risks originating from your activities?
    6. What are barriers or challenges for you to manage risk?
    7. Do you think your area would benefit from having a risk-based decision making process across campus? Why or why not?

ERM Survey Key Highlights

Varying perceptions of Mines risk appetite

On a scale from 1 (risk averse) to 5 (risk taker), how would you define Mines risk appetite?
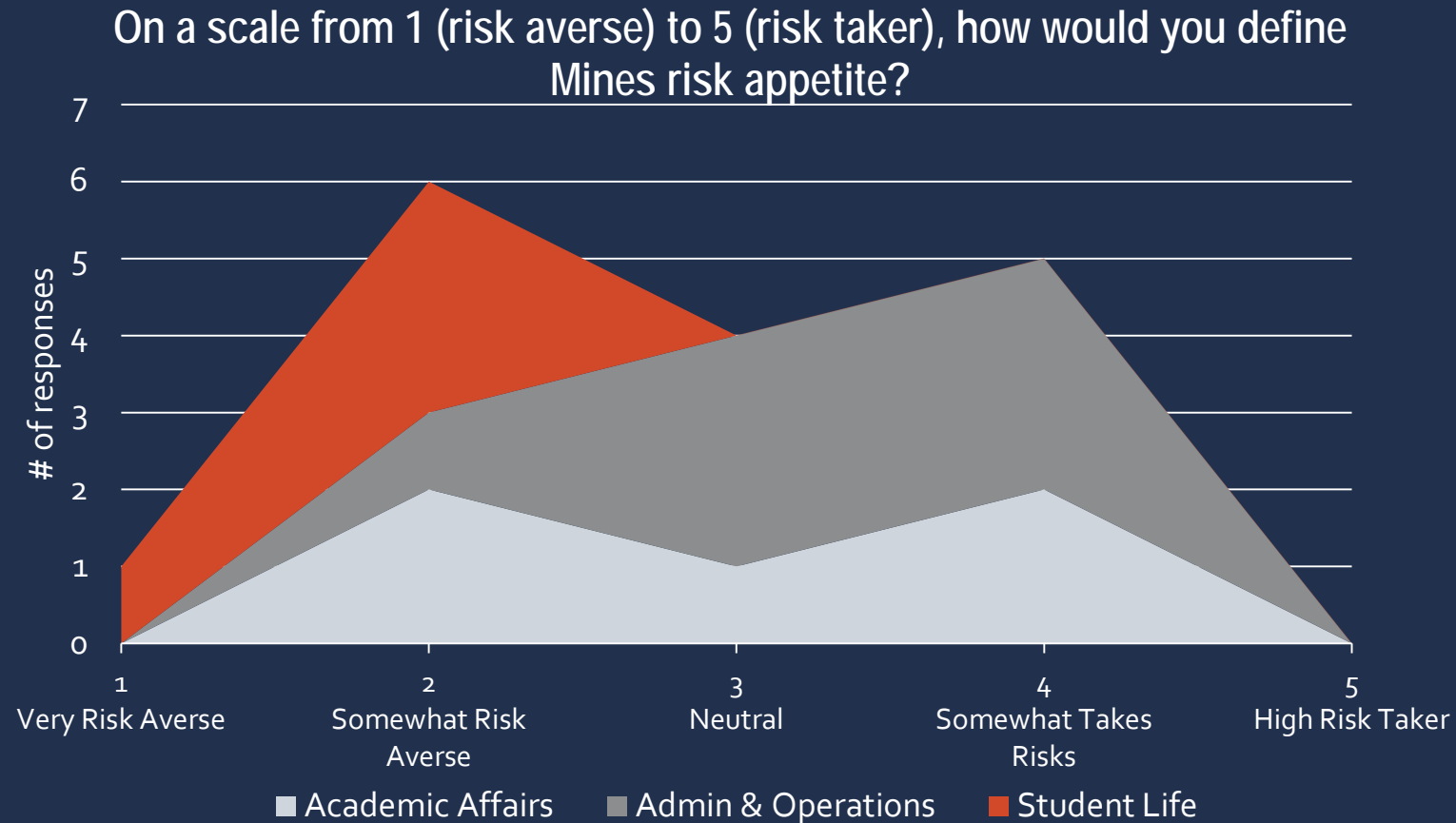
ERM Survey Key Highlights

we take

unknown

risks due to not

knowing the

potential

impact

There is a certain level of risk related to **research**

How would you define Mines' risk appetite?

inconsistent - we are very risk averse on some things that aren't high priority and vice versa

we have a "do what you want" culture and any policy following is considered **too risk averse**

ERM Survey Key Highlights

Is there a common meaning of risk across campus?   **NO**

How do you define risk?

- ❖ "Risk is the **likelihood** that a person may not be **harmed** or suffers adverse health effects if exposed to a **hazard**"
- ❖ "Management of **uncertain** or **unanticipated** conditions that impact business operations/goals"
- ❖ "**Rule breaking** or **results in harm** to CSM"
- ❖ "I generally think of risk as the **likelihood** of something (generally bad) – a threat - **being realized**"
- ❖ "**Don't know**"
- ❖ "Your definition of types above is the **first time** I've specifically considered a **definition**"
- ❖ "Causing significant harm to Mines from a **financial reputation academic standing** perspective"

ERM Survey Key Highlights

Challenges/barriers to risk management

ERM @ Mines

Mines without ERM	Mines with ERM
• Inconsistent definition of risk • Haphazard decision-making • Silos • Challenges to managing risks • Some monitoring of emerging risks	• Defined risk appetite • Risk mindset • Cross-departmental collaboration • Resources for managing risk • Enhanced awareness and monitoring of risks

Next Steps

Establish roles, commitment and define risk

Develop framework to assess risk

Perform initial risk assessment

Monitor performance and report on metrics

Expand the team and refine the process

Create and train core team of risk owners and leaders

Planned Milestones

2017

2/28/2017
Socialize ERM and identify participants

5/31/2017
Formalize **goals**

10/31/2017
Develop **framework**

12/31/2016
Determine **need** & make recommendations

4/30/17
Train participants

8/31/17
Define **risk appetite**

Planned Milestones (cont.)

2018

4/30/2018
Prioritize risks and develop **response plans**

Ongoing Communication

2/28/2018
Perform **initial risk assessment**

6/30/2018
Monitor performance and reporting

Questions **?**