Module 2 MGMT 6062

Plan Risk & Opportunity Management

Adapted from

- Baker K., Capital Budgeting Valuation, Hoboken, NJ, USA: John Wiley and Sons, 2011.
- Hubbard D., *The Failure of Risk Management*, Hoboken, NJ, USA: John Wiley and Sons, 2009
- Larson/Gray, Project Management- the Managerial Process, 7th ed, 2018, Chapter 7
- Andrews, Engineering & Geoscience, Practice & Ethics, 6th ed, 2019, Chapter 6
- www.theiam.org, Academic/Research Network, 2015 unpublished discussions

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Objectives of Plan Risk & Opportunity Management

- Create a plan for risk & opportunity management
  - Not the individual risks at this point….but risk & opportunity management in general
- Apply policies and procedures for risk management to the needs of the project
  - We do not necessarily CHANGE policies and procedures, unless the policies & procedures must themselves be changed; project managers must APPLY them
- Tailor risk management activities to the needs of the project
  - PM Principle 'Tailoring': "Design the project development approach based on the context of the project, its objectives, governance and the environment, using 'just enough' process to achieve the desired outcome …" PMBOK 7 Standard P.44
- Determine how to measure the success of risk management and risk management efforts
- Optimize benefits and value delivered

Risk Management: definitions

Hazard

- Physical situation which has the potential to cause harm
  - The hazard itself does not cause harm, until there is some event

Event

- Activity which may result in different outcomes.
  - More than one outcome may result from any given event
  - Encountering a hazard usually results in negative outcomes

Visibility

- Extent to which a hazard, event or bad outcome can be detected
  - If we can't detect it, consider whether we SHOULD know about it

Risk (bad outcome)

- Not the event itself, but the negative outcome when event happens
- The severity of the negative outcome is determined by
  - Event probability OR frequency (if it occurs at least once)
  - Size of the loss or negative outcome

Variability & Ambiguity

- Variability = Range & distribution of probabilities or frequencies
- Ambiguity = Uncertainty about what might happen

Risk Management: ‘known’ and ‘unknown’

To what extent are we aware of the risk & whether it is identified?

What is our understanding of the risk ?

	Known understanding of the risk and its negative effects	**Unknown** understanding of the risk and its negative effects
Identified known risk	**Known** known Manage the risk.	**Unknown** known Analyze to better understand the risk and plan for it.
Unidentified unknown risk	**Known** unknown There is information available about this risk but we haven’t identified it for our project.	**Unknown** unknown Didn’t see it coming. Research and discovery required.

Risk acceptance vs. risk tolerance

‘If we do a project, when do we get a return on investment?’ is only the financial view; let’s elaborate…

Risk acceptance

- The potential negative outcomes an organization is willing to accept in light of potential benefits. Negative outcomes could include:
  - Project: delays, cost increases, income & benefit losses
  - Company: political, economic, legal & technological problems
  - Community: economic, social, & environmental compromises
- Must evaluate through **benefit/cost analysis**, such as Competitive Strategy or PESTLE analysis (explained in backup slides)

Risk tolerance

- The amount of loss or negative outcome that an organization can withstand if an undesirable event occurs.
  - ‘Withstand’ means the project, the company and the community can repair any damage or loss; or at least, continue to exist
- Must be a **hard constraint on all decisions.**
  - Assume no benefits. What are the worst outcomes (costs)?

Critical issue

- What could happen if Accepted Risks exceed Risk Tolerance?

Opportunity Management: definitions

Situation

- Physical situation which has the potential to drive positive outcomes and benefits; for example, a company offers us a new job

Event

- Activity which may result in different outcomes; we accept the job
  - If the event occurs through encountering a hazard, the outcome is usually negative; please refer to the Risk Register.
  - However, an event may also bring positive benefits. Therefore, the event can also appear on the Opportunity Register.

Visibility

- Extent to which the situation, event or benefit can be detected
  - If we don’t know about it, consider whether we could find out

Opportunity (benefit)

- The potential benefits of the event can be estimated by
  - Event probability OR frequency
  - Magnitude of the positive outcome
- Consider whether the benefit might yield better outcomes
  - Eg the new job in new city pays more; but living costs are higher

Risk & Opportunity management: other definitions

Variability

- Variability = Range & distribution of probabilities or frequencies
  - Possibility: Something could happen, but it's not inevitable
  - Probability: Likelihood that event or outcome might happen
  - Frequency: Number of times that event or outcome happens
  - Range: Variation in size of event or outcome
  - Distribution: Probabilities of occurrence of different sizes

Uncertainty

- Uncertainty = imperfect information about the situation
  - Possible solution: Discover more information.

Ambiguity

- Ambiguity = more than one interpretation of the situation
  - Possible solution: Clarify assumptions & the decision-making process; consider alternatives & the possible outcomes.

Trigger

- Something which indicates that an event (usually undesirable) or outcome is about to occur or has already occurred, OR
- An event which causes another event to occur

Risk Reporting is Mandatory

Standards applied by Financial Reporting & Assurance Standards Canada [1]

IAS 1, 2021: Presentation of Financial Statements [2]

Purpose of financial statements

Financial statements are a structured representation of the financial position and financial performance of an entity. The objective of financial statements is to provide information about the financial position, financial performance and cash flows of an entity that is useful to a wide range of users in making economic decisions. Financial statements also show the results of the management's stewardship of the resources entrusted to it. To meet this objective, financial statements provide information about an entity's:

(a) assets;

(b) liabilities;

(c) equity;

(d) income and expenses, including gains and losses;

(e) contributions by and distributions to owners in their capacity as owners; and

(f) cash flows.

This information, along with other information in the notes, assists users of financial statements in predicting the entity's future cash flows and, in particular, their timing and certainty.

Publicly accountable companies MUST disclose risks to their business model, as part of normal quarterly and annual financial reporting

Therefore, Top Management expects Project Teams to identify, resolve and manage risks, or else!

1. https://www.ifrs.org/ IAS 1 Presentation of Financial Statements, 2021 version
2. https://www.canada.ca/en/revenue-agency/services/tax/businesses/topics/international-financial-reporting-standards-ifrs.html

Risk & Opportunity Management Plan

The actual Risks and Opportunities are identified & documented AFTER the management plan is created

Risk & Opportunity Management Planning: essential input documents

Project business case & charter

- Business case: Summary, rationale, and approval for project
- Project charter: Project scope & objectives, and the authority (if any) of the project manager & team.

Stakeholder Register

- Requirements of important stakeholders, for example
  - Internal employees, departments, and the project team
  - External customers, community, regulators, suppliers, financiers
  - Internal and external reporting

Risk policies & procedures

- Policies: Governance & control requirements
- Procedures: Work instructions, reporting process etc

Project Plan documents

- Examples include
  - Technical design and physical system integration
  - Environmental integration
  - Social design
  - Supply chain, distribution chain, related agreements

Risk & Opportunity Management Plan P 1 of 3

Introduction

- Introduction
  - Summary of entire plan: scope, time, cost, benefits, governance
  - Include discussion of what is OUT of scope

Methods

- Approaches, tools and data sources to be applied
  - Includes various subheadings eg Risk Identification Methods

Roles & Responsibilities

- Functional roles and decision-making authority for each role
  - Project team members; and essential people outside the team

Budget & Financial Control

- Budget & Financial Control for Risk & Opportunity Management
  - Any dedicated funding, including reserves
  - Policy to approve use of contingency & management reserves

Timing

- Which risk & opportunity management processes are to be used when, and how often?

Risk & Opportunity Management Plan P 2 of 3

Risk Categories

- Explain how risks are grouped. For example:
  - Project Risks by major WBS activity
  - External Risks according to STEEPLE classification: Social, Technological, Economic, Environmental, Political, Legal & Regulatory, Ethical.

Opportunity categories

- Explain how Opportunities are grouped
  - May use the same grouping as Risks

Management preferences

- Qualitative Analysis:
  - What will cause the risk or opportunity to move forward in the process?
- Quantitative Analysis:
  - What Expected Monetary Value of project cost, time, and benefits changes will cause risks or opportunities to move forward in the process?

Risk & Opportunity Management Plan P 3 of 3

Definitions

- As used in the Risk and Opportunity Registers
  - Terms must be consistent

Reporting & Control

- How will the outcomes of the risk & opportunity management process be documented, analyzed, communicated and audited?
  - Who is responsible for what?
  - Who has the decision-making authority?
  - What is the process?
  - What is the Change Management process?

Conclusion

- Action Plan
  - Include any necessary approvals to implement the process and any other important considerations

Reference list

- References must be listed at the back of the Report
  - References must also be cited in-line so the reader can see how they are applied

Strategic Analysis tools

Strategic analysis tools (MGMT 6054 course) are normally applied in developing & approving the project business case; they can also be applied in Risk Management

Industry analysis frameworks

SWOT (1960s)	• Internal: Strengths and Weaknesses • External: Opportunities and Threats	A place to begin
PESTLE (1967)	• Political, Economic • Social, Technological • Legal, Environmental	Fits with Sustainability
Five Forces (1980)	• Competitors, Barriers to entry • Substitutes • Suppliers, Customers	Traditional view, still practical
Business Sustainability	• Economic efficiency and value • Social equity and benefit • Environmental accountability	Added perspective for 21st century +

SWOT: a tool to begin discussion about Strategy

Focus	Strengths, weaknesses, opportunities, threats
Internal organization	**Strengths: add or maintain value in the current business** • What do we do well and should continue doing? Why? • What can we do more of? Why?
	Weaknesses / required improvements: must avoid subtracting value • What can we do better? Why? • Cash flow issues? How might we solve them?
External environment	**Opportunities: expand the business; IF profitable and a fit with strategy** • New markets and profits, new users, new and developing technology • Economic, regulatory, political
	Threats: shrink the businesses; need to reduce and eliminate threats. • Competitors, substitutes, resource shortfalls, declining markets • Economic, regulatory, political (can be opportunities or threats)

Adapted from Kubiak and Benbow (2009), Fabozzi / Euromoney institutional investor (2012)

PESTLE (or STEEPLE, if Ethics is assessed separately)

Political

- **How do political institutions and government affect business?**
  - Review tariffs, duties, quotas, import/export licenses, customs process, and any other country constraints or trade agreements.

Economic

- **How do economic matters affect the business?**
  - Determine cost & availability of resources, supplies, financing options.

Social / Ethics

- **How much importance does culture have in the market?**
  - Consider cultural expectations, moral and ethical practices, and equality in opportunities for industry, professionals and workers.

Technological

- **What is the state of technology, innovation, barriers & incentives?**
  - Review engineering, research and development, manufacturing and construction techniques, and expected technology trends.

Legal

- **What are the relevant laws & regulations that affect operations?**
  - Assess contract & tort law, employment, health & safety laws, environmental lregulations, professional regulations: at head office AND business location.

Environmental

- **What are the environmental concerns for the industry?**
  - Particularly relevant to mining, manufacturing, construction, natural resource usage, emissions, environmental site assessments.

Adapted from https://pestleanalysis.com/

Porter's 'Five Forces' model, plus one

Forces (pressures)	Potential responses to resolve the forces acting on the company
Competitors	• **Organization must differentiate itself relative to industry competitors** – Specialized intellectual property, design, brand, price, service, marketing
Barriers	• **Increase barriers for new entrants who might compete with the business** – Invest in R&D into new IP; offer products & services; trade secrets
Substitutes	• **Pre-empt other companies by offering additional distribution channels** – Be in more places; offer more products; explain other uses for products
Suppliers	• **Standardise price, quality, specifications for optimal efficiency with suppliers** – While considering suppliers as an extension of the business: effectiveness
Customers, buyers	• **Provide new products / services which customers are willing to purchase** – Mitigate any price sensitivity with features and quality
Regulators	• **Ensure compliance with government regulations, industry standards** – Generally requires technology and process innovation: good for business

Adapted from Porter, M: "Competitive Strategy: techniques for analysing industries and competitors", Free Press a division of Macmillan, 1980
The +1 refers to Regulators, which were treated as 'barriers to entry' in the original Five Forces model

Porter's 'competitive strategy' model for company analysis p 1 of 2

Management

- Competence of top / middle management, decision quality
- Culture, goals and execution
- Planning, operations, and staff turnover

Innovation

- Products
- Services
- Processes
- Research/development, technologies, patents, IP

Manufacturing

- Cost structure, flexibility
- Equipment, capacity
- Access to supplies
- Workforce attitude, motivation

Original model: Porter, M: "Competitive Strategy: techniques for analysing industries and competitors", Free Press a division of Macmillan, 1980
Adaptation: based on Fabozzi, F and de Nahlik C: "Project Financing, Eighth Edition", Euromoney Institutional Investor, 2012

Porter's 'competitive strategy' model for company analysis p 2 of 2

Marketing

- Brand and reputation
- Differentiation, customization and the product itself
- Distribution, sales and support

Customer base

- Size, market share
- Loyalty, growth
- Potential to expand

Financing (capital access)

- Cash from operations
- Cash on hand
- Availability of debt and equity

Original model: Porter, M: "Competitive Strategy: techniques for analysing industries and competitors", Free Press a division of Macmillan, 1980
Adaptation: based on Fabozzi, F and de Nahlik C: "Project Financing, Eighth Edition", Euromoney Institutional Investor, 2012

Project Financier's expectations of Project Sponsors

Technical ability

- Production & distribution
- Capacity and process management

Do the project

Financial ability

- Cash from Operations
  - Commit working capital to sustain existence, maintain fixed assets, acquire production resources (people, supplies)

Pay for the project

Legal ability

- Enforceable contracts, in a timely way, in appropriate currency
- Compliance with regulations: labour, environmental, product safety etc.

Avoid expensive trouble

Adapted from P334 De Nahlik & Fabozzi, "Project Financing – Analyzing & Structuring Projects", 2021
Adapted from Sumpton, David et al: "Stakeholder Engagement Guidelines for ISO 55000", www.theiam.org, 2019

Innovating for Sustainability: guiding principles [1]

Operational optimization	**Eco Efficiency:** • Do the same things better • Incremental improvements to 'business as usual'	Deliver Net Benefits from all economic, social, and environmental actions
Organizational transformation	**New Market Opportunities:** • Do good by doing new things • Grow & change the purpose of the organization	
System building	**Societal Change:** • Do good by doing new things with others • Drive positive institutional change	

2022: "We are talking about capitalism making money by 'doing good' for the world. We are not asking business to make less money." [2]

1. Adapted from "Innovating for Sustainability: a Guide for Executives, 2012, https://nbs.net/ accessed June 2018
   current 2021-2023 summary articles are available at https://nbs.net/the-basics/
2. Tima Bansal as quoted in https://iveybusinessjournal.com/guiding-corporate-sustainability/ July 2022

• As presented to Toronto Finance Network, September 2022, David Sumpton

End Module 2

Backup slides

We may not have time to discuss in class or online, however, you need to know the content. Please learn and apply it.

IFRS Foundation: SASB; and Sustainability Disclosures P 1 of 2

"Sustainability Accounting Standards Board (SASB) Standards connect business and investors on the financial impacts of sustainability.... guide the disclosure of financially material sustainability information by companies to their investors.

Available for 77 industries, the Standards identify the subset of environmental, social, and governance issues most relevant to financial performance in each industry." [1] Published in 2018. **IFRS Foundation absorbed SASB August 2022.**

IFRS S1, June 2023: General Requirements for Disclosure of Sustainability-related Financial Information [2]

Objective

1 The objective of IFRS S1 *General Requirements for Disclosure of Sustainability-related Financial Information* is to require an entity to disclose information about its sustainability-related risks and opportunities that is useful to *primary users of general purpose financial reports* in making decisions relating to providing resources to the entity.[1]

2 Information about sustainability-related risks and opportunities is useful to primary users because an entity's ability to generate cash flows over the short, medium and long term is inextricably linked to the interactions between the entity and its stakeholders, society, the economy and the natural environment throughout the entity's *value chain*.

For banks in Canada: disclosure begins 2024

1. https://www.sasb.org/about/
2. https://www.ifrs.org/ June 2023 S1 General Requirements for Disclosure of Sustainability-related Financial Information

IFRS Foundation: Sustainability Disclosures P 2 of 2

IFRS S1, June 2023: General Requirements for Disclosure of Sustainability-related Financial Information [1]

Core content

25 Unless another IFRS Sustainability Disclosure Standard permits or requires otherwise in specified circumstances, an entity shall provide disclosures about:

(a) governance—the governance processes, controls and procedures the entity uses to monitor and manage sustainability-related risks and opportunities (see paragraphs 26–27);

(b) strategy—the approach the entity uses to manage sustainability-related risks and opportunities (see paragraphs 28–42);

(c) risk management—the processes the entity uses to identify, assess, prioritise and monitor sustainability-related risks and opportunities (see paragraphs 43–44); and

(d) metrics and targets—the entity's performance in relation to sustainability-related risks and opportunities, including progress towards any targets the entity has set or is required to meet by law or regulation (see paragraphs 45–53).

Same Core Elements as recommended by G20 Global Task Force on Climate Related Financial Disclosures

1. https://www.ifrs.org/ June 2023 S1 General Requirements for Disclosure of Sustainability-related Financial Information

IFRS Foundation: Climate-related disclosures

IFRS S2, June 2023: Climate-related Disclosures [1]

IFRS S2 *Climate-related Disclosures*

Objective

1 **The objective of IFRS S2 *Climate-related Disclosures* is to require an entity to disclose information about its *climate-related risks and opportunities* that is useful to *primary users of general purpose financial reports* in making decisions relating to providing resources to the entity.**[1]

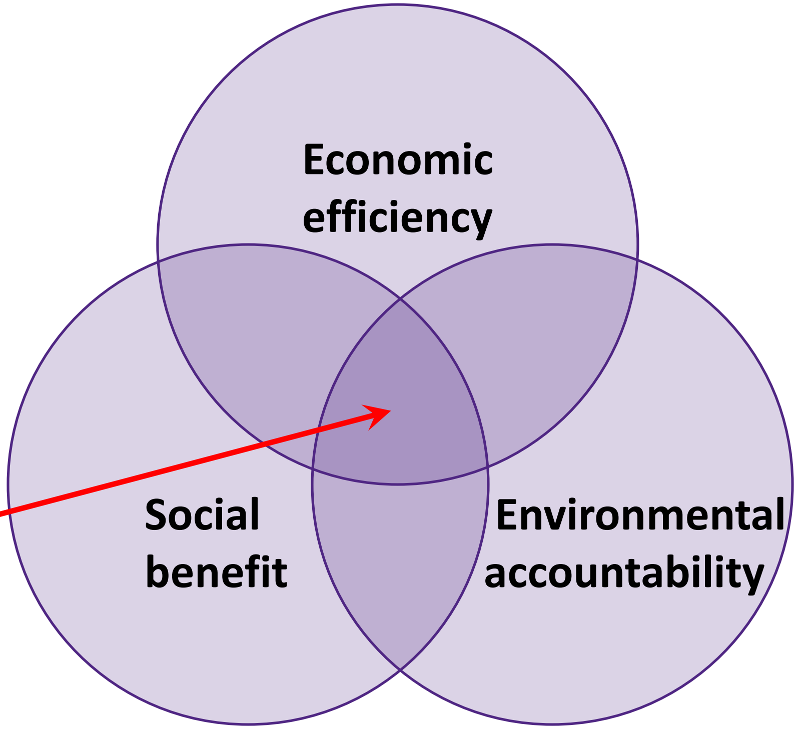
2 This Standard requires an entity to disclose information about climate-related risks and opportunities that could reasonably be expected to affect the entity's cash flows, its access to finance or cost of capital over the short, medium or long term. For the purposes of this Standard, these risks and opportunities are collectively referred to as 'climate-related risks and opportunities that could reasonably be expected to affect the entity's prospects'.

Similar focus on Cash Flows!

1. https://www.ifrs.org/ June 2023 S1 General Requirements for Disclosure of Sustainability-related Financial Information

What do Sustainable Businesses do?

- "Industrial development must subscribe to the three principles of economic efficiency, social equity, environmental accountability …
- Sustainable businesses create economic value, healthy ecosystems, and strong communities." [1]
- **"Sustainable businesses align their private actions with the public interest …**
- Deliver net-positive benefits, now & later." [2]



Essential requirements: [3]

- Effective institutional systems
- Responsible law and order
- Education and knowledge
- Ethical decision making

1. https://nbs.net/ Basics of Business Sustainability articles, 2021/22.
2. https://www.ivey.uwo.ca/sustainability/ First Academic Conference, David Sumpton, 2016
3. Adapted from https://nbs.net/ Business Sustainability Primer, 2011.