

CGMA TOOLS

How to communicate risks using a heat map

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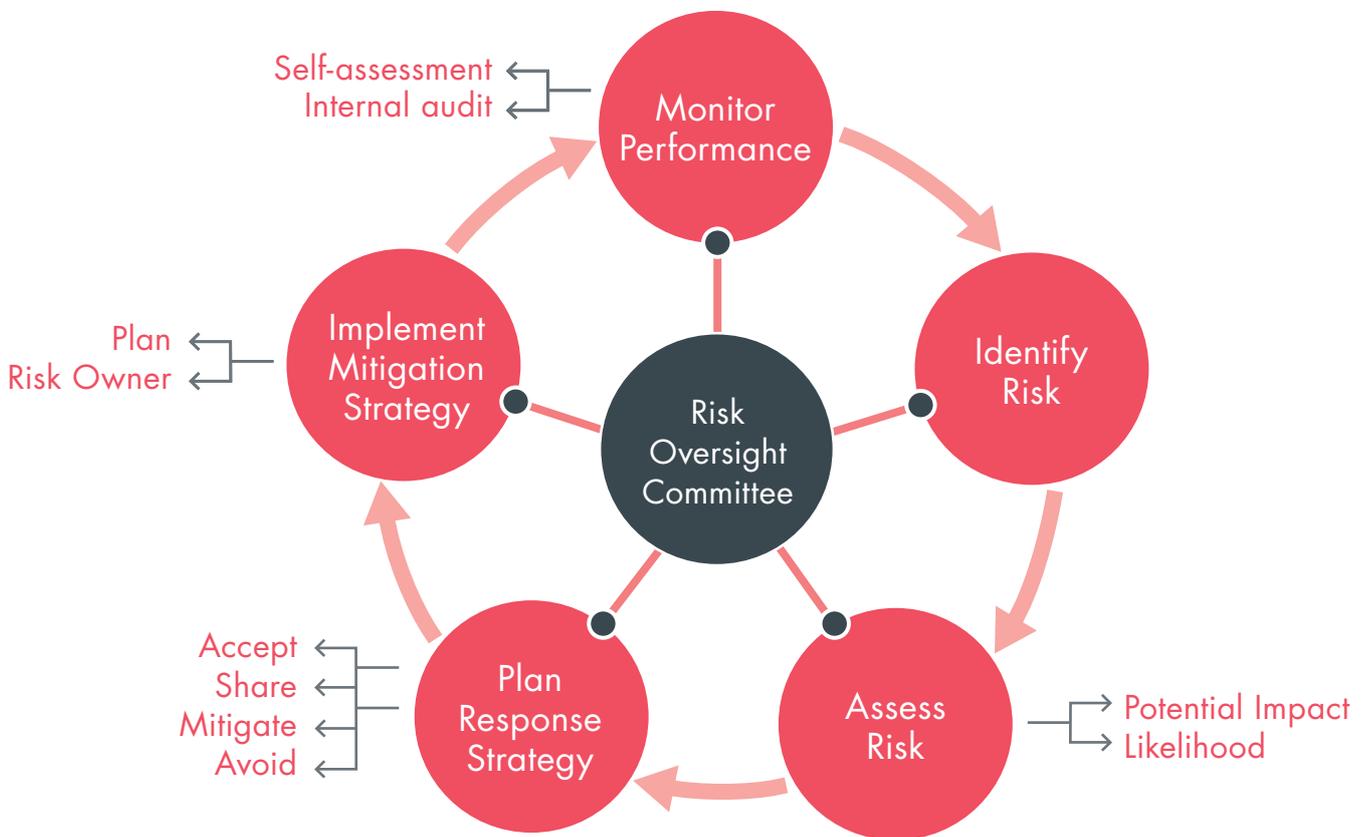
Two of the world's most prestigious accounting bodies, AICPA and CIMA, have formed a joint-venture to establish the Chartered Global Management Accountant (CGMA) designation to elevate the profession of management accounting. The designation recognises the most talented and committed management accountants with the discipline and skill to drive strong business performance.

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INTRODUCTION

Managing and communicating risks have become crucial tasks in today's economy. COSO's *Enterprise Risk Management—Integrated Framework* provides a way for organisations to incorporate risk management into their day-to-day operations. Enterprise risk management (ERM) is a structured enterprise-wide view of risks affecting an organisation. An ERM process is shown in figure 1.

FIGURE 1: ERM Process



Organisations use a variety of ways to identify entity-wide risks (eg, surveys, workshops, risk factors disclosed in financial reports, etc.). When the entity-wide risks are identified then each risk is assessed for

potential impact and likelihood of occurring. This tool, a risk heat map, is used in the risk assessment process and is a great for facilitating communication.

INITIAL RISK ASSESSMENT: POTENTIAL IMPACT AND LIKELIHOOD OF OCCURRENCE

In the risk assessment process, visualisation of risks using a heat map presents a big picture, holistic view to share while making decisions about the likelihood and impact of entity-wide risks within an organisation. A heat map is a two-dimensional representation of data in which values are represented by colours and can be designed from being simple (qualitative only: 3x3) to very complex (both qualitative and quantitative: 5x5). It is important to carefully design the heat map so that the terms used to describe “potential impact” and “likelihood” are what is used in your organisation.

When a heat map is used in workshops to assess the risks by individual managers, the discussions can be enhanced, for they can see how risks in one part of the organisation impacts another part of the organisation. The resulting heat map can also be used to communicate the risk assessment to senior management, audit committees, and boards of directors. The heat map also enables a business conversation about mitigation alternatives.

Organisations may want to start out by using a qualitative only (3x3) heat map to do the risk

assessment shown in figure 2. The horizontal axis shows the likelihood of a given risk occurring, that is, the likelihood that the risk will materialise and become an issue. The vertical axis shows the potential impact that the risk will have on the objective or goal not being achieved should it materialise. The colours are risk areas (eg, green coloured boxes are in the low area; yellow boxes are in the medium area; red boxes in the high area). The risks are plotted on the heat map based upon the “Potential Impact” and “Likelihood” of occurring (Risk = Impact × Probability/Likelihood of occurring).

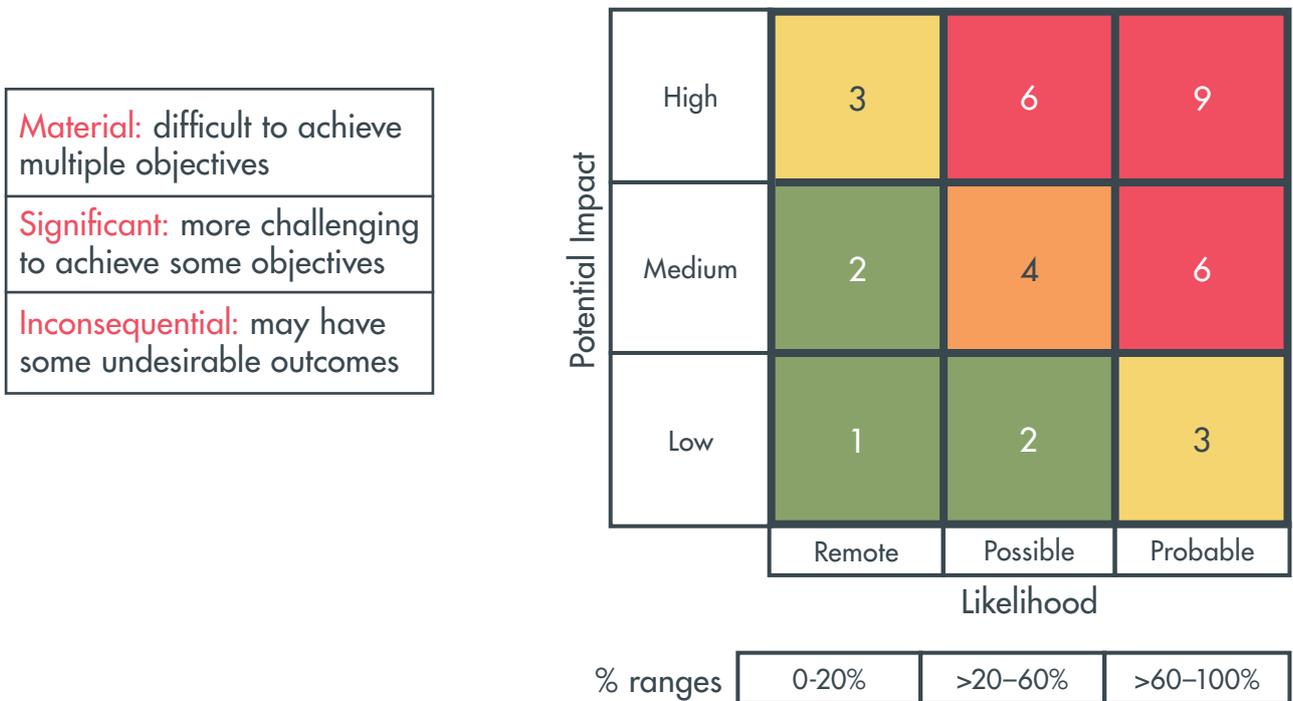
FIGURE 2: Enterprise Risk Assessment Scale (Qualitative Only: 3x3)

Potential Impact	High	3	6	9
	Medium	2	4	6
	Low	1	2	3
		Remote	Possible	Probable
		Likelihood		

DEFINING YOUR METRICS

As organisations gain experience doing risk assessments, they may want to build on their qualitative heat map by adding definitions to “Potential Impact” and “Likelihood” that quantify the terms. For “Potential Impact,” definitions for what is meant by High, Medium, and Low and for “Likelihood,” percentages could be added for Remote, Possible and Probable as shown in figure 3.

FIGURE 3: Enterprise Risk Assessment Scale (3x3)



The percentages, metrics, and definitions would come from your organisation’s policies and what is used in your organisation. It is important to get approved terminology for the percentages, metrics, definitions, and terms so that everyone in the organisation

understands what they are and how they are used in the risk assessment process. This common language is an added benefit in the communication process of assessing risks.

QUANTIFYING POTENTIAL RISK IMPACTS

One can continue expanding on the "Potential Impact" as shown in the following 25 point assessment scale (5x5) by adding Earnings Per Share (EPS) or Cash Equivalents. For example two cents per share may equate to \$3 million, which may further define a "Significant" rating. This heat map may be more precise, however, the main point is to hold discussions about the risks facing the organisation, so that management can either mitigate the risk (protecting value) or seize the opportunity (value creation) in alignment with its risk appetite. Please refer to figure 4 as an example.

FIGURE 4: Enterprise Risk Assessment Scale (5x5)

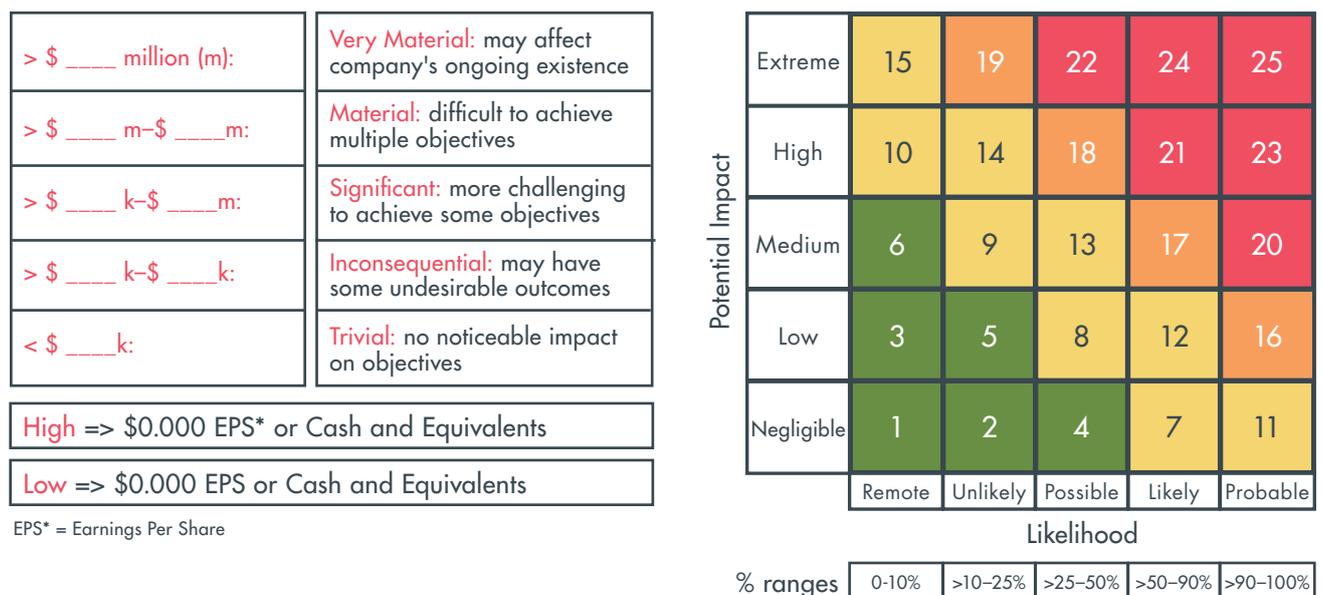


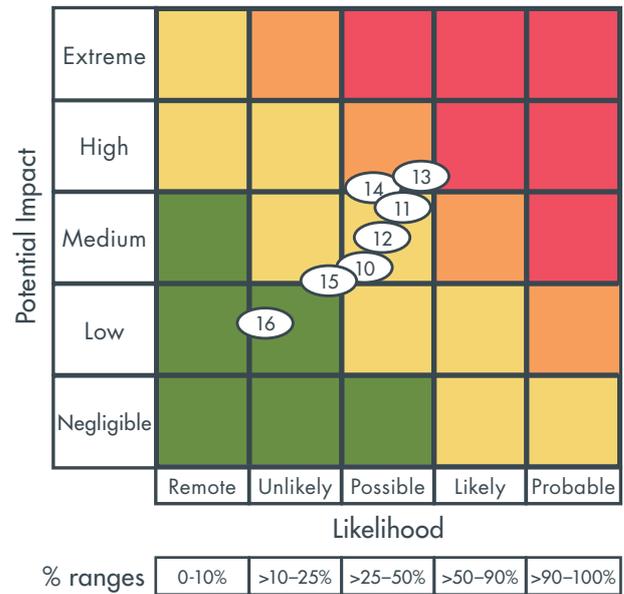
Figure 5, on the next page, shows a sample heat map for risks that were primarily grouped together according to their interrelated nature and effect on operations, not on all of the identified risks for a company.

FIGURE 5: Enterprise Risk Assessment Scale (5x5)

> \$75m:	Very Material: may affect company's ongoing existence
> \$1.95m-\$75m:	Material: difficult to achieve multiple objectives
> \$340k-\$1.95m:	Significant: more challenging to achieve some objectives
> \$25k-\$340k:	Inconsequential: may have some undesirable outcomes
< \$25k:	Trivial: no noticeable impact on objectives
High => \$0.025 EPS	
Low => \$0.005 EPS	

Risk Legend

- (10) Obsolescence Risk
- (11) Customer Concentration or Distribution Risk
- (12) Manufacturing Risk
- (13) NPI Risk
- (14) Supply Chain Risk
- (15) EH&S Risk
- (16) Physical Asset Risk



Potential risk management gaps and follow-up:

- A more accurate sales forecasting function was a recurring theme thought to be a key risk indicator associated with several of these interrelated risks.
- The perception of supply chain risk increased with the vertical supply chain as viewed by downstream business units.
- The likelihood and potential impact of risk events appeared highest with the new product introduction (NPI) process, indicating that opportunities may exist in how the company is structured and manages NPI.
- Environmental Health & Safety (EH&S) and physical asset risk have robust, dedicated functions responsible for risk management and were considered fairly well managed in the United States. However, some uncertainty exists among participants as to risk ownership and how mature these functions are in Asia Pacific locations.

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