

Appendix C

Assessing Risk Likelihood and Impact

Summary of reviews of public sector risk management exemplars, local peer authorities and other international organisations

Risk is by its very nature uncertain; if something can be said to be certain, it is not a risk to be managed but an issue to be addressed. However, proper assessment of risk impact and likelihood is critical to the effectiveness and credibility of the risk management process - the understanding of each risk will be more complete, enabling better control measures to be implemented, leading more reliably to the achievement of related objectives.

It can be very difficult to obtain accurate quantitative data on which to assess likelihood:

- there may be no relevant previous data on the likelihood of occurrence of the risk;
- such data as there is may not be available;
- the risk exposure may be unclear, e.g. is it related to length of time, number of tasks, etc;
- the number of times the risk event has been deliberately avoided may not be known;
- data needs to be adjusted to take into account any changes that have occurred in the environment, e.g. increased number of properties, severity of weather conditions, etc;
- it may not be possible to know the likelihood of a risk if it is dependent on outside factors;
- the likelihood of future events can only be estimated.

Because valid quantitative data is often not available, qualitative indicative descriptions are usually used to score likelihood assessments. However, reliable likelihood assessments are important and the risk management process may be undermined if they appear to be wholly subjective. Various alternative approaches and different techniques are available, but none is foolproof or applicable in every situation:

- labels (high, medium, low) or phrases (improbable, possible, likely) - can be ambiguous;
- odds (1:50, 1:10, 1:3) - can be difficult to comprehend;
- percentages (5%, 40%, 70%) or decimals (0.05, 0.4, 0.7) - can imply precision where reality is less certain;
- ranges (1-10%, 25-50%, 70-90%) - can be artificial, may not reflect ranges of likelihood in reality.

The purpose of risk management is to ensure that risks are properly managed, not to achieve absolute accuracy in assessments of likelihood or impact. Using numbers when assessing risk could give a misleading impression of precision, causing risk reviewers to assume more than is actually intended.

A review of risk assessment methodologies of risk management exemplars, local peer authorities and other organisations showed that they used a range and combinations of descriptive, percentage and proximity¹ criteria to assess likelihood. None of the organisations using percentages to score likelihoods link these to potential financial impacts in order to prioritise risks.

Although the assessment of risk likelihood is therefore mainly subjective, risk reviewers can use a variety of approaches and techniques to bring a degree of objectivity to the process, always understanding that these are meant to guide a score, not impose a value.

¹ Proximity: when the risk might occur; some will be predicted to be further away in time than others

Prioritising risks based on potential financial loss multiplied by percentage chance of occurrence could suggest a precision that is unintended, confuse consideration of other aspects of risk likelihood and impact and possibly result in incorrect management of risks. (Some risks may not have a direct financial implication; seeking to attach a monetary value to such risks could divert attention from the main effects of their impact.)

All this indicates that the current practice of using a range of descriptive, percentage and proximity guidelines to assess likelihood should therefore be continued. However, it is suggested that the guidelines for assessing likelihood could be updated to reflect a range of time periods, rather than just “in the next 12 months” as at present (although that phrase does relate to the time horizon considered when the Council’s risk registers are reviewed).

Table of organisations reviewed

Organisation	No. of criteria	Means of assessing	
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Risk management exemplars

Birmingham Audit	4	descriptive percentages	e.g. likely, will occur in most circumstances; 50% - 80% chance
London Borough of Bexley	6	descriptive percentages proximity *	e.g. likely to happen at some point in next 1-2 years; circumstances occasionally encountered (few times per year); 51% - 75% chance of occurrence
London Development Agency	4	percentages	e.g. 50% - 75%
Warwickshire County Council	4	percentages proximity	e.g. 41% to 75% chance of circumstances arising; likely to occur in the next 1-2 years

* See Ruleworks below

Local peer authorities

Cambridgeshire County Council	5	descriptive	e.g. is likely to occur at some time in normal circumstances
Fenland District Council	5	descriptive	e.g. there is a risk that the event/incident will occur at some time
Huntingdonshire District Council	5	descriptive proximity	e.g. likely; likely to happen within the next year

Other organisations

University College London	5	descriptive	e.g. will probably happen or recur, but it is not a persisting issue/circumstance
World Intellectual Property Organisation	3	descriptive	e.g. an event will probably occur in many circumstances
Ruleworks	n/a	proximity	i.e. when the risk might occur: some will be predicted to be further away in time than others
Queensland Government	4	descriptive proximity	e.g. happens about once a year in this industry
SANS Institute	3	percentages proximity	e.g. 26-75% chance of successful exercise of threat during a one-year period