# HOW HIGH IS HIGH ?

**© *January 2007, Dr David Hillson PMP FAPM***

*david@risk-doctor.com*

Common definitions of "risk" describe it as an uncertainty which if it occurs would affect one or more objectives. These two dimensions of risk (uncertainty and its effect) are commonly called "probability" and "impact", though other terms are used. Deciding the importance of a particular risk requires assessment of these two dimensions, as well as other characteristics.

The most basic risk assessments often use descriptive labels for probability and impact, such as High, Medium and Low. This would mean that a risk which is not very likely to happen but which would have a major effect if it occurred could be described as "Low-High". While this practice is very common, it can lead to significant misunderstandings. For example if I tell a colleague that one of my risks was assessed as Low-High, she has no way of knowing exactly what I mean. When I say "Low probability", do I mean that the risk has a one-in-a-million chance of happening, or do I use this term to mean <50% ? In the same way, does "High impact" mean a total disaster leading to loss of the business, or does it mean a delivery delay of one month?

The usual solution to this potential problem is to define scales for probability and impact for a particular situation, and to insist that all risk assessments of this situation use the same scales. So everyone assessing risks to a specific project might agree that "Low probability" will mean 10-30%, and that "High impact" will mean more than 12 months schedule change or >$100,000 cost change.

This raises a couple of important questions: who defines the scales, and how?

Definitions of probability and impacts are an expression of the *risk threshold* or *risk appetite* for a particular project or business situation. This means that they should be defined by the person who owns the objectives which are at risk. For a project, this means the project sponsor in discussion with other key stakeholders. For a business decision the responsible manager must determine where to set the risk threshold.

This still leaves the question of how to set the numbers. Probability scales are easy to define, by simply dividing the 1-99% range into several sections. Impact is more difficult. Who is to say whether a delay of one month represents a mere inconvenience or a total disaster? Would saving €50,000 be a triumph or just a pleasant surprise?

The process for setting the impact scale for threats is for the responsible person first to decide how much impact would be completely intolerable, describing this in terms of each key objective (e.g. time, cost, performance, reputation etc.). These values are associated with the top impact scale point (such as Very High). The lowest scale point (for example Very Low) is addressed next, setting this to a level of impact which is regarded as negligible. Intermediate scale points (e.g. Low, Medium etc) can then be set between these outer limits.

Once the threat scales are set, they can be inverted to form scales to be used for assessing opportunities. This simply requires treating impacts as negative for threats (lost time, additional cost, damaged reputation etc), and as positive for opportunities (saved time or cost, enhanced reputation etc). Alternatively an organisation may decide to define specific opportunity scales which differ from threat scales.

Defining probability and impact scales in this way allows everyone assessing risks to use a common framework. My "Low-High" can then be understood by all my colleagues, and it will mean the same as their "Low-High". All the risks within a particular project or business situation will be assessed using the same definitions, allowing us to rank them by their relative importance. This simple definition process answers the question "How high is High?", and makes sure that we are all speaking the same language when assessing our risks.