Analysing Assumptions & Constraints : IF-THEN

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No-one knows the future with perfect certainty, which of course is why we need risk management. But sometimes we try to guess what might happen, and use that information as a basis for planning or decision-making. The proper name for such a guess is an "assumption", and these are an important source of risk, for projects, businesses and life in general.

An assumption is a way of dealing with an uncertain future when there are a number of possible options. In its simplest form an assumption is a decision to proceed on the basis that one option will turn out to be correct and the others will not happen. For example, we might assume that our suppliers will deliver on time, or that our client will sign-off all approvals within two weeks, or that all key members of our project team will remain for the duration of the project. But what happens if we assumed the wrong thing? In most cases a false assumption would lead to a problem for the project, since we usually tend to assume that things will go the way we want.

Of course not all assumptions matter equally. There are some assumptions which might prove false without having a significant effect on the overall project, but there are others where a different outcome could be serious. Fortunately there is a simple process for testing how risky assumptions might be, and for including them in the risk process if necessary. A simple IF-THEN statement can be written for each assumption, in the form :

> ***"IF this assumption proved to be false, THEN the effect on the project would be …"***

The IF side tests how likely the assumption is to be unsafe, and the THEN side tests whether it matters. Another way of describing this is to see the IF statement as reflecting *probability*, whereas the THEN phrase is about *impact*. And probability and impact are the two dimensions of risk. This simple approach can be used to turn project assumptions into risks. Where an assumption is assessed as likely to be false and/or it could have a significant effect on one or more project objectives, that assumption should be considered as a candidate risk.

This type of Assumptions Analysis is a powerful way of exposing project-specific risks, since it addresses the particular assumptions made about a given project. There are however two dangers with this technique :

1. The first weakness is that this technique can only consider explicit assumptions, which have been consciously made and openly communicated. There are however many implicit or hidden assumptions which we all make every day, some of which are very risky.

2. Secondly this approach tends only to identify downside risks, threats that a particular assumption may prove false and result in a problem for the project. Assumptions Analysis is not good at identifying opportunities because most of our assumptions are optimistic.

The first shortcoming can be overcome by a facilitated approach to identifying and recording assumptions, using someone independent and external to the project to challenge established thinking. To be fully effective, Assumptions Analysis needs full disclosure.

For opportunity identification, the technique can be extended to address and challenge constraints. These are restrictions on what the project can or cannot do, how it must or must not proceed. But some of these constraints may not be as fixed as they first appear – indeed some of them might be assumed constraints. In fact it might be possible for a constraint to be relaxed or perhaps even removed completely. In the same way that assumptions can be tested to expose threats, a similar IF-THEN test can be applied to constraints to identify possible opportunities :

> ***"IF this constraint could be relaxed or removed, THEN the effect on the project would be …"***

Instead of making assumptions about the future, or accepting that stated constraints are unchangeable, being prepared to challenge assumptions and constraints can expose significant threats and opportunities which can then be addressed through the risk process.