

Adding Risk To The Project Baseline

Simon's Observations on Projects – SOOP

By Simon Harris, PMP®, IPMA-D, CGEIT, Ex PRINCE2® examiner

Putting Risk in the Baseline(s)

Standards writers are beginning to catch-up with practitioners and describe management of risk for threat and opportunity beyond the opening line of their topical chapter. But they still stop short of meaningful insight into what risk is and so how to put it into the baseline plan.

Risk (Re-?) Considered

There are many definitions of risk around. Mostly they say less than 2/3rd of what we need in order to manage risk within the day-job of 'execute project to baseline plan'.

I will start my definition with 'risk is a future conditional state': nothing more. Consider the words: future thus prediction, conditional thus uncertain, state thus change of status quo.

Now I can move you on to consider that that state has causes (note plural) and the state has consequences (also plural).

Every Silver Lining

Every silver lining I see in projects has a cloud around it; that is every future state has a whole collection of impacts each of which is a candidate for action (for now ignore the added complexity that any one consequence may be caused by more than one condition).

Likewise every future state has a collection of causes. Some causes are alternatives to each other; any one will cause the future state. Some causes have to happen in combination to create the future state.

Gradual risk onset

A further point of note is that classical texts such as the PRINCE2® manual often tell us of risk events (causes) as if they are like a gun going off: instantaneously and obviously. Project reality includes the gradual onset of risk. For example imagine I booked an early flight to attend a sales meeting. Now my plane is showing its second update for a lengthening delay. I'm concerned that at this rate it threatens my ability to make my meeting. When do I reach the point where I should I phone and try to push back people's diaries or even rearrange an alternate day to make the visit? After all I might still be OK!

Recap and Extension

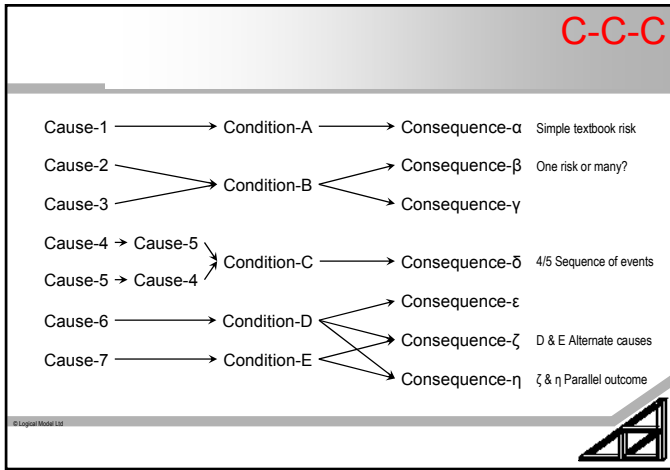
So risks are one or more causes that if they happen will cause a future state that has one or more consequences I care about.

Risk Covers Threat and Opportunity

Outcome may be a more neutral word than consequence but destroys the alliterative allure of Causes, Condition, Consequences. Outcome naturally includes good outcomes and bad outcomes. Any one condition is likely to be a combination of both opportunity and threat.

Risk is relative

Note that both threat and opportunity are expressions of future position against the current status quo. To be under threat I have to have something to lose and opportunity only exists when the future state is in some way of 'value' or 'utility' to me. For purposes of discussion imagine a future state with a simple cause and simple consequence. My first challenge is to describe the risk well.



Good Risk Description Is Crucial

Without the cause and consequence clearly described I cannot assess likelihood or desirability and thus significance of the future state and with out the timing of both cause and consequence I cannot assess urgency of responses.

Good Description

Perhaps the first question to pose is "is a single triplet of Cause-Condition-Consequence one risk" or "is the singular uncertain condition" the risk such that Causes → Condition → Consequences is one risk?

No Right Answer

Since every cause has potential for multiple conditions neither choice is a wholly trouble free approach to recording risk.

I prefer the latter as for each condition I want to consider actions to affect probability of causal events and I want to consider actions to effect the outcomes.

Proximity or the Time Dimension

However the risk is described I have to consider several time-frames to asses if time is available to take action and for the action to take effect.

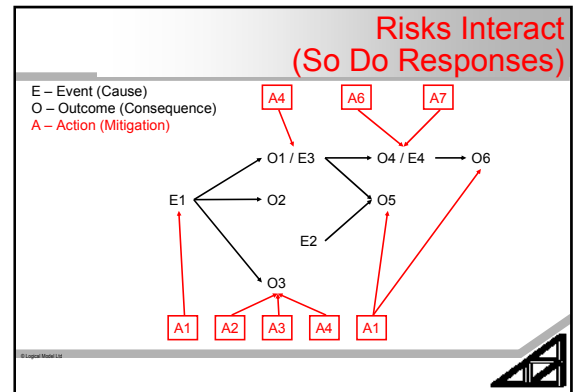
First how long before the causal event might I have to prepare for it? How-long after it is unavoidable before the impact is felt? And possible how long until reward or recovery are a fact?

Responses

Assuming description has been achieved responses can be developed. I find the vocabulary of responses jumbled so use the following definition: "mitigation is ANY action taken to change the likelihood, timing or impact of a cause or a consequence."

Meaningful Vocabulary Is Hard To Define

After that it gets harder. For opportunity we need positive terms and for threat negative terms to label our actions that are intended to affect the probability of the causes occurring.



For actions taken to affect the impact of the outcomes we need opportunity and threat oriented terms and for actions to delay or accelerate the time to the (onset and completion) of the causes and timings of each consequence.

Many suggestions have been made and none is comfortably correct.

As if this wasn't enough complexity in the vocabulary affecting correct inclusion into the baseline we are not done yet.

The Crux

Now we come to the crux of adding risk to the baseline. When discussing mitigations we need to consider that some actions are designed to affect cause and thus their usefulness is restricted to prior to the event.

asopom IPMA USA

If we select these responses to be taken (EG Testing all our electrical devices for fire hazard) then they are fully resourced work-packages in our RAM (WBS/ OBS), critical path analysis, resource profile, cash-flow, Gantt chart and EV curve. IE Included all representations of the baseline plan as summarised by the ‘cost, schedule, scope triangle’. But some responses are contingent upon the causes occurring.

Complexities of Contingency

The contingent responses are more complex to properly consider because some may be prepared before the cause and all are only used after the cause or not at all.

For example buying a fire extinguisher and training the fire warden happens before the fire, is contingent upon a fire occurring and may never be used in anger. The cost of the extinguisher has become a 100% fact while probability of usage is still between 0.0 something% and 99.9 something %.

For some contingencies, if the time-to-onset allows then they may only be prepared after the cause is a fore-gone conclusion; perhaps arranging temporary accommodation while my fire damaged premises are repaired. We spot them in projects when people say “we will cross that bridge if we come to it”.

Threat and Opportunity is Just Perspective

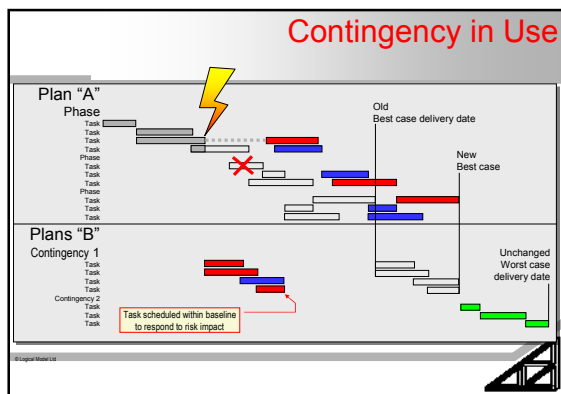
Imagine a customer design review has the risk in threat terms of “We may need to rework the design because the customer raises comments” or in opportunity terms of “We may be able to start implementation immediately (because the customer approves the design without change)”.

Including opportunity in the baseline

In terms of baseline schedule and budget the worst-case delivery commitment includes post-review rework. For the opportunity scenario rework is scheduled the day after review and if not needed all subsequent tasks and the final project delivery date can be “left shifted” in the schedule. Also budget at completion can be lowered by the unneeded staff time. That is, contingency is retired (to margin?)

And As Threat

In the threat scenario planning will (should) have planned implementation after review, then best-case deliver date, then the assigned and costed “Plan-B” for rework then committed worst case-delivery. Budget will have been allocated and committed for implementation but rework costs while committed to the project are not yet released to the work-package.



The rework task in “Plan B” are fully defined and included in the committed unallocated budget. Plan B’s duration is within critical path determination of pessimistic deliver date, but not at the point it will, if needed be scheduled in reality.

When the review concludes either the threat of rework is reality and the rework task is rescheduled to “today” and the implementation task and earliest delivery is ‘Right Shifted’ after rework (the project will still end within the window of original best to worst case delivery dates). Or if rework turns out not to be required then the worst

case delivery date can be ‘Left Shifted’ to remove the “Plan-B” rework task (and the contingency that was committed but unallocated is released).

Selecting Responses

When I have the ‘as-full-as-I-can-make-it’ set of possible mitigations for all the causes and all the consequences I can perform benefit cost analysis to decide which to place in the Performance Measurement Baseline (PMB) of committed and contingent actions.

Whether committed (cause related) response or contingent (consequence related and still pre-event) response I have to recognize the contention between resource demands that enable actions to improve both threat and opportunity position.

Response Development

For each risk there are three dimensions to consider when preparing potential responses: 1) consequence/ impact, 2) causes/ probability and 3) proximity.

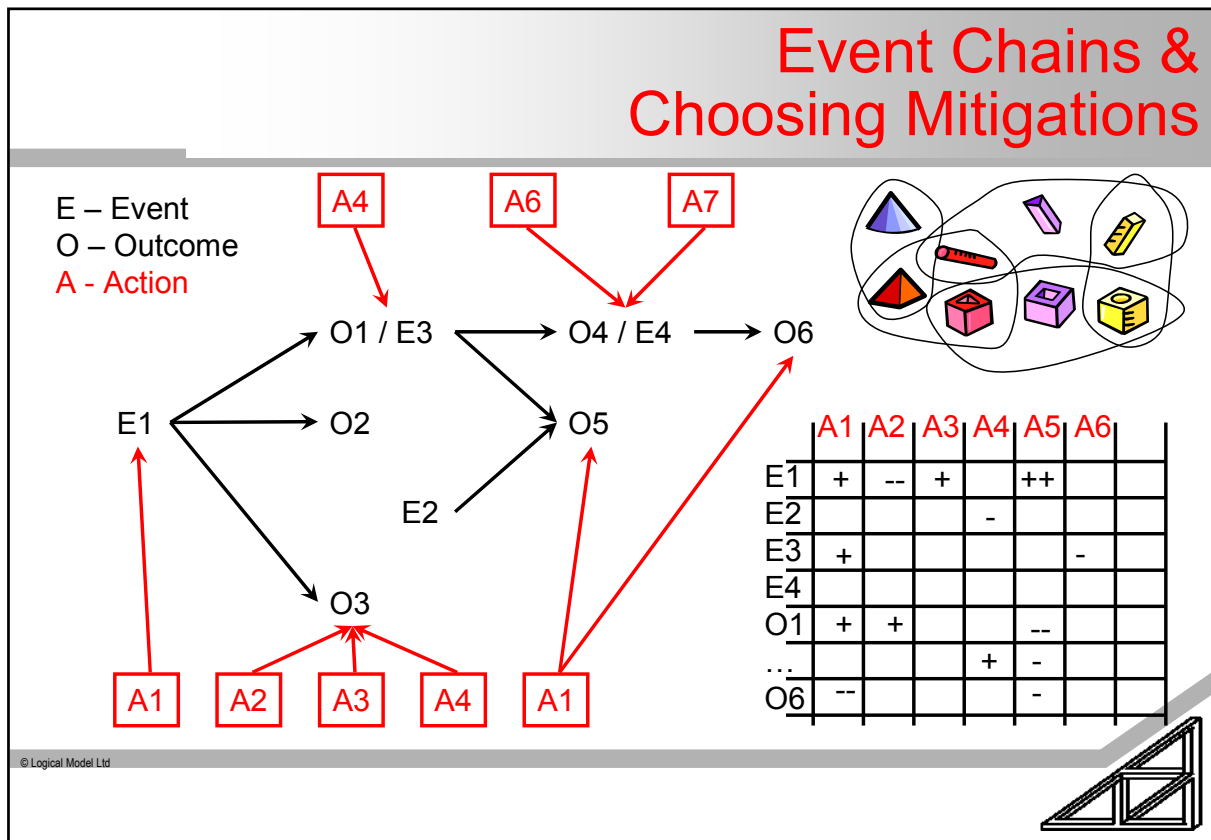
Responses to probability if selected are as we have already explored committed actions. They are scheduled into the baseline RACI/ RAM/ WBS/ OBS/ Gantt.

Probability of expenditure for these actions is now 100%. All the things we might have done with the resources consumed are an opportunity cost. A source of regret that desirable things are not done because resource was diverted to handling uncertainties.

Responses that deal with impact or contingent responses are held as "Plan B" ready to become the committed baseline. Any preparation is again sunk cost. While some costs are still only potential but the resource is committed and thus the opportunity costs are real.

Proximity

In all cases I have to consider the time to option loss. That is I have to consider if there is time between realising an action is desirable and the point at which I have run out of time to use it.



The Risk Register

Many text books suggest keeping (duplicating) far too much information in the risk register! The ‘right’ place to keep the project baseline is in the WBS/ OBS/ Gantt chart/ Resource profile/ Cash-Flow/ EVM curve. That is where we manage the project from on a day to day basis. Fragmenting the project’s actions across a set of different models such as the risk register simply increases cost and complexity of controls and

asopm IPMA USA

the likelihood something gets overlooked. The Risk register must cross-reference to the records of primary account.

Risk Register Content

What is left for the register to record is the basic administration factors such as 'raised by', the (as yet?) un-adopted response actions, an audit trail of actions taken if version control of other records doesn't record that for us, and if they do then the relevant cross-reference.

Impact Amends The Business Case

The risk's impact's primary record belongs in the business case (of customer and/or supplier depending on how the contract [formal or informal] is structured). If a risk improves (opportunity) or threatens return on investment, either by changing project costs and timescales or affecting the project outcome's affect on the post-project BAU state then by definition the business case is changed.

As with the actions the project's justification should not require a search of documentation in a variety of places in order to see the full picture for decision making.

Risk owner

The last generally poorly understood topic to discuss here is 'risk ownership'. Risk is a complex personal and emotional topic. Each cause→condition→consequence will trigger different responses in different people and groups. Risks have stakeholders with different roles and levels of interest.

The risk register should cross-reference (or record) those who are involved in each risk. The risks stakeholders. These individuals and groups are either taking action to manage the risk or will benefit / suffer should it become a fact or have an interest in the risk for their own reasons.

Those monitoring and acting directly on the risk are recoded in WBS/ OBS and perhaps project communications policy.

The only meaningful "risk owner" is the authority that will ultimately pay for any actions and/or consequences arising from the causes and consequence.

Adding Risk To the Baseline

The start point is that every project should embrace a risk aware culture. IE the project IS an exercise in opportunity pursuit or threat avoidance, and it will be subject to strategic uncertainty (will the result "work" when achieved?) and tactical uncertainty (can we create the result?).

ALL actions that are committed belong in the Gantt chart and associated WBS/ Resource profile, Cash-Flows and tracking records. All actions that will be committed if the causes occur are in the Gantt chart/ cash-flow 'beyond the best' delivery date and 'above the minimum budget at completion'.

Finally all costs of actions and all affects of the outcomes are in the current business case benefit cost analysis. The business case, PBS/ WBS/ OBS/ Gantt chart/ Resource profile/ Cash-flow IS the project's baseline and thus it is these records that must contain 'risk' for its correct inclusion in the baseline.

Perhaps the project's generally poor risk performance is caused by failure to properly include the risk in the baseline at all.

About the Author

Simon Harris, PMP, CGEIT speaks, consults, mentors and trains on governance of change.

Simon helps client's boards with ownership of benefits enablement from "light-bulb" to harvesting.

Simon helps PMs match controls to project uncertainty, complexity and board risk appetite.

He can be contacted at Simon@LogicalModel.Net and +44 77 68 215 335 (UK).

Editor's note: Simon is also nearing completion of a book, **PRINCE2 For Real**, to be published soon. Written with the same combination of deep insights and freewheeling irreverence as this article, a quick look at the draft shows this to be a good one!



And, while we don't normally do this, below are a few of the banners from Simon's company; they are from the original of the article. Thanks Simon!

Logical Model Ltd: Training, Mentoring and Consultancy in:

- basic project management tools and techniques,
- project control using PRINCE2™,
- governance, ownership and sponsorship of change,
- master-classes in project risk management,
- master-classes in project quality management,
- master-classes in earned-value management, critical chain analysis.

Support to managers in embedding skills

Creation of Project Offices, Centres of Excellence and project quality systems

Those who think education is expensive have not accounted what they pay for ignorance.

Attendees after a training course need opportunity to practice skills 'back@work', a manager who understands that new ways take practice to be performed well, and a source of support to ask questions of and seek advice from.

Logical Model Ltd's approach mentors the manager and the trainee.

PRINCE2® is a Registered Trade Mark of the Office of Government Commerce in the United Kingdom and other countries
PMP is a Registered Trade Mark of Project Management Institute in the USA and other countries