PROJECT RISK MANAGEMENT
Past, present, future

VIEWS FROM THE CHAIR
PROJECT RISK MANAGEMENT: PAST, PRESENT AND FUTURE
VIEWS FROM THE CHAIR

A review of project risk management from 1986-2012
by
Past Chairmen of the
Project Risk Management Specific Interest Group
of the
Association for Project Management (APM Risk SIG)

Edited by Dr David Hillson HonFAPM
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This document contains the views of past Chairmen of the Association for Project Management’s Project Risk Management Specific Interest Group (APM Risk SIG) and the views expressed are entirely their own and do not represent the views of APM.

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EDITOR’S FOREWORD

As the Association for Project Management (APM) celebrates its 40th anniversary, there’s a natural tendency to review the past and look to the future. This of course is the role of risk management, learning from past successes and failures, and shaping future decisions in order to minimise threats, maximise opportunities, and optimise achievement of objectives. And for over twenty-five of those forty years, the APM Project Risk Management Specific Interest Group (Risk SIG) has served APM members and the wider project management community.

For many APM members, the SIGs are where APM adds most value. Each SIG focuses on a particular aspect of project management, either a knowledge area or a specific application domain. While APM branches offer local networking, APM SIGs provide thought-leadership in specific disciplines and subsets of project management. And the first SIG to be established by APM in 1986 was the one covering the vital area of managing risk in projects. Since then the APM Risk SIG has gone from a small focus group of about a dozen aficionados to a major force in the risk community, with nearly 3000 members and growing.

As part of the APM’s anniversary celebrations, we offer this small volume which reviews the activities of the Risk SIG from a unique perspective – the SIG chair. The Risk SIG has been fortunate to count among its chairmen some of the main thought leaders in project risk management. An internet search of the key contributors to the field will turn up many of our chairmen’s names, and they’re still leading the way today. So the “views from the chair” contained in these pages provide a distinctive commentary on project risk management past, present and future.

As my own career in risk management has developed, I’ve learned a lot from my fellow chairmen, whether as colleagues, collaborators, coaches or competitors. I thank each one for their contributions over the years, to risk management itself, to the APM and our SIG membership, and to me personally. As you read these personal reflections from nine unique perspectives, I’m sure you’ll learn a lot, not just about the history of project risk management and our ground-breaking APM Risk SIG, but also about where risk management is headed in future. The journey is not over – enjoy the ride!

Dr David Hillson HonFAPM
The Risk Doctor
June 2012
INTRODUCTION: THE ROLE OF THE RISK SIG WITHIN APM

David West, Volunteers’ Manager, APM

The Project Risk Management Specific Interest Group (Risk SIG) was the first to be established within APM back in 1986, and since then it has been at the forefront of knowledge development in the risk discipline through the production of the “Project Risk Analysis & Management (PRAM) Guide” (1997, 2004), as well as its active interfaces and joint projects with other risk-related professional bodies (notably the Institute for Risk Management, the Risk Management Working Group of INCOSE, and the Project Management Institute’s Risk SIG).

Reading these recollections from previous Risk SIG Chairmen provides a fascinating insight into the development of the SIG over the last couple of decades. Managing risk in those early days strikes me as very straightforward, where according to the first APM Body of Knowledge (1991) “risks should be dealt with either by reducing them to an acceptable level or managing them carefully”. A comparison with the ideas being discussed at recent Risk SIG meetings illustrates how far the subject and the SIG has come in the last two decades.

As I write, there are currently twelve APM SIGs with a further one likely to be introduced later this year. In my role as APM Volunteers’ Manager, I am often asked about the purpose of a SIG. APM SIGs are an eclectic bunch. Some consider themselves as experts, some are merely groups of interested individuals. Some see that their mission is to create and develop new ideas, whereas others prefer to focus on promoting existing knowledge of their chosen subject. Some SIGs concentrate on producing written material, whilst others prefer to host physical events where project professionals can meet each other and talk about current issues in what is becoming an old-fashioned way. Others still prefer to focus on their virtual presence. The Risk SIG covers most of these bases, acting as a forum for expert discussion as well as promoting knowledge more widely within APM, through both published documents and events.

When new SIG committee members asked me what is the correct approach, I generally sit on the fence and say that all are appropriate. A main aim of APM is to increase the level of professionalism of those delivering projects and all the above approaches help towards this goal. The maturity of the subject and the composition of the SIG committee all contribute to the approach that each SIG takes. From my position, the Risk SIG has been blessed with a number of genuine subject matter experts over the years, who have been at the forefront of developing new ideas as well as disseminating their ideas through vehicles such as the PRAM Guide and regular face-to-face professional development events. The second edition of the PRAM Guide is currently the third highest selling APM publication, behind only the Body of Knowledge and Competence Framework. This represents a successful identification of professional need met in a highly appropriate way.

However I believe that there are a number of challenges for the Risk SIG to overcome in the coming years, in common with APM itself and all other SIGs.

The first challenge will be to address the needs of Generation Y. This modern generation of project professionals behave in a vastly different way to those that have gone before them. This generation has grown up with computers and the internet being part of everyday life and they have no knowledge of a world where instant information was not at their fingertips. They are social media savvy and less inclined to blindly defer to an ‘expert’, as the popularity of Wikipedia and self-diagnosing health websites shows. Their future is highly uncertain and they will arguably face the toughest career environment ever. A major challenge for APM and its SIGs is in meeting their need for instant gratification.

Secondly we need to make full use of the internet. Stephen Weiswasser, senior VP of ABC in the US, dismissed the internet in 1995 as “the CB radio of the 1990s”. I am sure by now he has rescinded his views and acknowledged the transformative effect that the web has had on how we all do business today. A recent internet outage at APM Towers really illustrated how much work is dependent on having...
internet access and how people rely on it now for their daily lives. In Peter Campbell’s chapter he references the growth of SIG membership from a few hundred to over 2,500 in a few years (as shown in the figure), and Peter attributes this to the growing profile of risk management. Whilst this is probably correct, an indispensable enabling factor is also the increased presence of APM and the Risk SIG on the web during this period.

![Graph showing membership growth from 1980 to 2012.](image)

Australian blogger Belinda Moore recently summarised the challenges facing professional associations and posed a list of questions, suggesting that these were indicators of the “stirrings of the ‘perfect storm’ of generational, cultural and economic forces that are combining to challenge the way associations operate.” Her questions included:

- Are younger members joining your association and then leaving after a year or two?
- Or not joining at all?
- Are you struggling to get people to your events?
- Are you battling to recruit quality volunteers?
- Is your board full of men aged over 50?
- Are competitive organisations forming around you?

Many of these questions are pertinent to the Risk SIG and the future success of the SIG requires us to acknowledge this changing world and grasp the opportunities that these changes represent.

Can APM and its Risk SIG meet these challenges and remain relevant? I think we can. The Risk SIG has a diverse committee group and a track record of delivery of influence. I am sure that by acknowledging the changing world they operate in and embracing new technology, they will continue to be seen as thought leaders for their topic and influence the next generation of project professionals.

The previous Risk SIG chairmen who have written this publication are drawn from the leading thinkers and practitioners of the profession and these chapters offer their unique personal perspectives on the past, present and future of project risk management.

The following pages are essential reading for anybody who is interested not only in how project risk management has developed in the last three decades, but also in how it is likely to develop in the coming years and I thoroughly commend them to you.

Chris Chapman

Bad news is rarely welcomed – but in my view project management based on current common practice project risk management is a mess, we have reached key forks in the path, and poor choices will be made by default if frank and effective debate is not forthcoming.

I mean ‘mess’ in the common colloquial sense and the ‘soft systems’ sense (an interconnected set of problems which need holistic treatment). By ‘common practice project risk management’ I mean using features (like ‘risks’ are events or conditions which may or may not occur and managing ‘risks’ is the purpose of the exercise) which are inappropriate but widely employed by clients, advocated by consultants, and condoned or even encouraged by guides and standards. From my perspective, the inappropriate features which characterise ‘common practice’ as distinct from ‘best practice’ are unhelpful at best, seriously dysfunctional in some cases. I think this ‘mess’ undermines project management as a whole, and it needs resolution at board level by organisations using project management if it is not resolved by the project management profession.

In my view ‘what comes next’ involves some key turning point decisions for everyone involved. To understand the choices, and how we got to where we are, we need to understand where we started and what we did along the way.

To discuss the issues involved in a constructive manner we need a common language. Part of the problem is we do not have one. As a starting point example, Mike Nichols (APM Chairman, and a key architect of RAMP) likes the idea ‘uncertainty’ is ‘imperfect or incomplete knowledge’, but David Hillson (co-author of PRAM) likes the idea ‘risk’ is ‘uncertainty that matters’. I think both ideas are very important, but to use either as a definition is not helpful. They are both more usefully seen as different perspectives, although either can claim to embrace the other, and neither provides the focus in terms of purpose needed to define efficient and effective processes in a direct manner. David’s idea used as a definition of risk can be interpreted to imply uncertainty which does not underlie risk is not important, and a common practice view of ‘risks’ as events is acceptable. Mike’s idea used as a definition of uncertainty can be interpreted to imply uncertainty and risk management are separate in an unhelpful sense. I have frequently encountered both these interpretations, to the extent they might be seen as features of common practice, although neither David nor Mike may condone the associated approaches. Reconciliation of both ideas/perspectives is possible in a general (unrestrictive) framework which considers the purpose of advocated perspectives explicitly, and in my view this reconciliation is a crucial step in an important journey. This chapter addresses reconciliation and outlines a few other aspects of the proposed journey.

I believe it is essential to use ‘nominal’ definitions like ‘uncertainty’ is simply ‘lack of certainty’, ‘opportunity’ is ‘possible favourable outcomes’, and ‘risk’ is ‘possible unfavourable outcomes’. All three are starting point definitions which are as general (unrestrictive) as possible. Further, all three are ‘nominal’ in the sense that any other equally unrestrictive definitions will do, so people can use their own comparable definitions, and plain English can be used for discussions involving ‘subject experts’ and everyone else.

I also believe it is essential to build on these general definitions using explicit working assumptions to address what needs to be done and how to do it. We can flag (highlight) these working assumptions by associating them with a set of lenses designed for specific process purposes. For
example, we can choose to look at uncertainty about the achievement of objectives, using a ‘performance lens’ to emphasise the working assumptions associated with this chosen perspective, and focus on managing opportunity and risk in terms of underlying base plans and contingency plans. Alternatively, we can choose to look at uncertainty in terms of ‘what do we need to know to get to all following stages in the project lifecycle beyond what a performance lens will tell us?’ And we can interpret this alternative perspective as using a ‘knowledge lens’ – to clarify the different perspective associated with different working assumptions. Both lenses (working assumption alternatives) are needed, because they serve different purposes using different tools. The same underlying uncertainty is involved, observed in a different way for different purposes. Using a ‘performance lens’ you can see what David and most other people are talking about when discussing managing opportunity and risk. Using a knowledge lens you can see some of what Mike is talking about which is rather different, and manage knowledge acquisition and lifecycle planning. Like me you might choose to call what you do using both lenses ‘uncertainty management’ rather than ‘risk management’, explicitly addressing uncertainty, opportunity and risk in addition to relevant knowledge acquisition, but you can use another label if you wish.

If you adopt this broad view it is important to recognise four separate types of uncertainty in the context of usually dealing with ‘sources of uncertainty’ which are composites of all four, although one or two types may dominate particular decomposition structures. One type is ‘event uncertainty’ – associated with outcome scenarios or conditions which happen or not. A second is ‘inherent variability’, uncertainty associated with exchange rates and weather for example – something always happens, it is just a matter of degree. A third is systemic uncertainty – simple dependences and complex feed-forward or feed-back relationships between sources of uncertainty as viewed in the overall decomposition structure selected. The fourth is ambiguity uncertainty, a residual of all other kinds of uncertainty, including uncertainty about plans, objectives, and relationships between interested parties.

The rest of this chapter uses my lens concept and related definitions for a plain English discussion of the last half century of formal project uncertainty, opportunity and risk management, divided into a pre-1986 period plus convenient following periods.

**The late 1950s to 1985**

PERT (Program Evaluation and Review Technique) provided the first project uncertainty management model to receive extensive attention, in the late 1950s. PERT involves a probabilistic network model of activity precedence relationships, embedded in a highly iterative method. It addresses all uncertainty worth quantification in overall variability terms: uncertain events, inherent variability, systemic uncertainty and ambiguity – but it makes restrictive assumptions about systemic, event and ambiguity uncertainty. Comparably structured and computed cost models followed. Duration and cost models were ‘built-ins’ for project planning and control, not ‘add-ons’. Monte Carlo simulation generalised the computational basis of PERT and related cost models. Generalised PERT (embedding decision trees in PERT networks to deal with contingency responses when an activity is delayed) and then GERT (Graphical Evaluation and Review Technique – using Markov processes to deal with repetitive activities, contingency responses within an activity and weather windows) followed in the 1960s. Moder and Philips (1970) discuss all these developments, their advantages and limitations.

In 1974-5 I worked full-time with Acres Consulting Services in Canada on a range of assignments. Three of the biggest were relevant to this chapter: applying GERT to a very large artic pipeline project; applying simpler cost variants to hydroelectric projects; using fault tree and event tree models plus decision tree generalisations to critique US nuclear power safety regulations and help develop related Canadian standards. In 1975, through Acres, I began a part-time eight year consulting support role for BP International in London, primarily addressing offshore North Sea
projects. SCERT (Synergistic Contingency Evaluation and Review Technique) was the name given to the first published version of the approach developed, following the PERT/GERT family tradition. Its basis was building fault tree and event tree ideas into the GERT or simpler PERT family models, breaking uncertainty sources down into separate components to model separate specific responses as well as general responses to sets of problems. Retaining the PERT top-down ‘all relevant uncertainty worth quantification’ view was crucial. Decomposition of uncertainty to resolve ambiguity was judged within an iterative process with sensitivity diagram tools and decision diagram tools. From about 1980 I began a series of Acres assignments with mainly US and Canadian clients: PetroCanada, Gulf Canada, Alaska Power Authority, the US Department of Energy and the Fluor Corporation for example. The range of the contexts addressed was wide, and many of the decisions were project concept stage or design stage decisions.

Throughout this period I saw my consultancy role as a designer of uncertainty, opportunity and risk management models and processes, and a key member of the teams implementing them. I learned a huge amount from everyone involved. I saw my university research role as synthesising what I had learned by doing and managing analysis in practice, testing my learning against the literature, contributing to the literature, and testing further the syntheses of ideas as the research/consultancy process kept cycling. I used the ‘risk management’ language which most people used – ‘sources of uncertainty’ were called ‘risks’, for example.

1986-1992

When I was asked to help set-up and chair the APM Project Risk Management SIG about a dozen people initially responded. Our membership grew to about three dozen by 1992. About half the membership turned up for meetings, held three or four times a year. The opening agenda was usually ‘what can we do to get more people using risk management?’ The main agenda was usually a talk by one of the participants about how they approached a particular project – what they had done and what they learned. We were all learning from each other – a talking shop with a view to doing our own jobs better and persuading others to follow suit. We each synthesised what we learned in our own ways. Some participants worked ‘client-side’, with organisations like Shell. Some worked for consultancy or software providers, like Euro Log. Most had a deep experience base, but some had just been asked to take on a project risk management leadership role from a standing start.

1992-2002

The first significant change when Peter Simon took over chairing the SIG was a growth in membership in absolute numbers – to about 100 in a few years. The number of organisations adopting project risk management was taking off. We were doing something right!

The second was interest in producing a guide, resulting in PRAM (APM, 1997). I drafted the process chapter, synthesising the experience of the other 20 people involved and my experience with SCERT plus its derivatives for chapter 3. The book Project Risk Management (Chapman and Ward, 1997) was restructured to adopt the PRAM phase structure, and interpreted as an elaboration of the PRAM process.

Some other chapters of the PRAM Guide, including the principles introduced in chapter 2, developed a very different perspective, based on probability-impact grid treatment of ‘risks’ and limiting ‘risks’ conceptually to uncertain events – part of the ‘common practice project risk management’ set of features noted earlier. Editing of my draft of chapter 3 (as agreed by the working party) revised my nine phase structure to attempt to make these very different approaches compatible; but this was not a feasible task approached from the perspective used, because it makes different starting (framing) assumptions which are more restrictive (less general). I am sure those doing the editing
were doing their best from what they saw as the relevant perspective, and with 50:50 hindsight my failure to understand and get more directly involved in discussions of principles was clearly an important part of the problem. But I suspect that if I had understood the issues better we would still have not reached 100% agreement on everything, because of our incompatible background framing assumptions and our lack of tools for exploring the implications of these differences.

A parallel learning process for me was involvement in the development of the first edition of the RAMP guide (ICE and AP, 1998). RAMP took a whole lifecycle perspective. RAMP acknowledged PRAM’s role at a more detailed level for the execution and delivery planning stages, but adopted a somewhat different process structure to suit a direct interest in the whole lifecycle of projects at a reasonably simple overview level.

Designing and delivering a contribution to an extensive IBM UK culture change programme led by their CEO in this period helped me to develop an interest in opportunity management beyond looking to capitalise on good luck, simple ways of treating complex choices involving more top-down focus, and sophisticated communication of complex non-quantifiable concerns. A number of other clients also provided a very rich learning environment. However, while the first edition of my book with Stephen Ward sold 10,000 copies, and clients were never short in supply, it seemed to me that most of the growth in project risk management use was at a very simplistic ‘common practice project risk management’ level, which was limited, ‘add-on’, nowhere near best practice, and never a sensible place to start to get to best practice. It was becoming increasingly clear that the view Stephen and I argued as clearly as we could – common practice features and tools which were not appropriate should be scrapped – was still a minority position.

**2003 to 2011**

The 2003 second edition of *my Project Risk Management* book with Stephen Ward clarified how its perspective differed from PRAM and RAMP and common practice risk management, and it was explicit about the distinction between sources of uncertainty and ‘risks’ limited to uncertain events. Some members of the team preparing the second edition of the PRAM Guide (APM, 2004) were persuaded ‘project risk’ needed explicit recognition – as a top-down view of all uncertainty worth quantification. Further attempts to reconcile alternative views from a more general perspective were also embedded in the second edition of the PRAM Guide. However, a common practice perspective co-existed with a broader perspective, without indicating the implicit unresolved disagreements involved, and I have first-hand experience of extremely serious problems this has caused clients.

By the middle of this period some critiques of common practice project risk management began to appear, including *Prioritising Project Risks – A Short Guide to Useful Techniques* (Hopkinson et al, 2008).

Towards the end of this period Stephen Ward and I agreed that ‘uncertainty management’ was a better approach description and label than ‘risk management’. *How to Manage Project Opportunity and Risk – Why uncertainty management can be a much better approach than risk management* (Chapman and Ward, 2011) reflected this. The mind-set changes which flowed from this perspective change were numerous. Examples include explicitly making all framing assumptions as general (unrestrictive) as possible, making all working assumptions as explicit as possible, making the simplicity-complexity tensions clearer, and making the need for organisation wide communication in a common language operational. A key fundamental challenge this facilitated meeting was integrating the PRAM and RAMP perspectives at an operational level of detail – providing a practical and directly usable approach to integrating the planning for execution and delivery focus of most APM project managers with the whole lifecycle business case focus or design and operations focus of everybody else.
Also towards the end of this period I worked for Mike Nichols on his Highways Agency (HA) report to the Secretary of State for Transport (Nichols, 2007), and its subsequent initial implementation by the HA. In the light of these assignments and later working party discussions, when drafting Chapman and Ward (2011) it became evident that I had been using a ‘performance lens’ variant for 50 years as if it were the only lens for viewing uncertainty, implicitly leaving all other views of uncertainty to the rest of ‘basic’ project management. A separate ‘knowledge lens’ concept provided a very different perspective with many important features, including providing a form of glue between project risk management and the rest of project management.

The period preparing the initial draft of this chapter

The ‘performance lens’ introduced in Chapman and Ward (2011) is explicitly treated as the primary lens, the focus of the book. The ‘knowledge lens’ is explicitly treated as a secondary perspective for looking at all relevant knowledge not associated with the performance lens.

Writing this chapter has triggered the idea we should reserve the knowledge lens for ‘what we need to know in order to do what needs to be done to get to further project stages beyond what other lenses tell us’, and explicitly separate at least two further lenses.

One is a ‘residual lens’, an explicit ‘everything else’ lens, decoupling the residual from the ‘knowledge lens’. Amongst other uses, when working parties are discussing alternative framing assumptions and associated working assumptions, people can try to fit their views into a performance lens, a knowledge lens, a ‘complexity lens’ (explained below), or a residual lens – and they can propose a particular way of looking through the residual lens which in effect proposes an additional fifth lens of their own invention, addressing specific issues which my four lenses view has failed to identify an explicit need for so far.

The ‘complexity’ lens is introduced here for several reasons. One is providing an illustration of what I mean by further specific lenses.

What I mean by a ‘complexity lens’ is a very general (unrestricted) view of uncertainty with a holistic approach in mind for understanding relevant complexity. Established approaches which will serve as examples include ‘soft systems’ and ‘soft OR’ approaches to ‘messes’ (Rosenhead and Mingers, 2001). None of these ‘soft’ approaches assume we are dealing with projects or plans or any other specific context. Multiple parties with conflicting motives and objectives are a given, and communication to develop a shared understanding of the mess addressed is central. The explicit focus is top-down holistic understanding of a context and the relationships between relevant issues, viewed in particular operational frameworks.

A second reason for introducing a complexity lens concept in this chapter is a way of illustrating the need for a ‘multiple lens’ view of process choices. If several lenses are needed we require a clear understanding of sequence issues. We may also have to address the idea of a ‘host’ or ‘meta’ methodology when embedding ideas from other approaches. In either case priorities when we start are clearly important, and priorities may shift. For example, ‘forensic project risk management’ like that described by Williams (1995) illustrates what can be achieved starting from a ‘complexity lens’ perspective in an appropriate context. This complexity lens can be embedded in a performance perspective process, but a complexity lens might be a useful place to begin as a way of clarifying the context before using both performance and knowledge lenses.

A third reason for introducing a complexity lens concept in this chapter is a possible contribution to better communication in working party discussions. Starting with one lens and moving on to a different lens as a situation changes might be a viable framework for discussing differences in opinion in working groups trying to reach a consensus on what to say. It might provide part of
language for talking about embedding approaches in other approaches, and when approaches have to be used separately to explicitly address alternative starting positions.

**The rest of 2012 and beyond**

An important January 2012 insight from work with a current client is ‘stealth assumptions’ can be used as an explicit starting point for weaning people away from unhealthy hidden framing assumptions.

The ‘stealth assumption’ idea was a late 2011 development with Stephen Ward for the more general purpose of exposing shortcomings in published approaches based on restrictive framing assumptions using the more general perspective of our 2011 book. In effect, ‘stealth assumptions’ are the best estimate we can make from a broader perspective of the framing assumptions other people must be using to justify (make sense of) approaches we see as too crude and restrictive. We can use stealth assumptions as working assumptions within a broader framework, to test their robustness. This provides a good basis for an open literature discussion of the best working assumptions for all contexts of interest. It also helps to identify approaches which are never appropriate. The ‘stealth’ label implies these assumptions are ‘off peoples radars’, and if they saw them they would take action to avoid them.

As a simple example with general and immediate relevance, say an organisation uses point (single value) estimates for duration and cost estimates, a feature of common practice. We can start a conversation about this by selecting a particular case those involved understand. We can observe that this point estimate implies the P10 (ten percentile value) must coincide with the P90 (ninety percentile), the only acceptable basic interpretation from a ‘minimum clarity’ perspective. ‘Clarity’ is insight which can be communicated. If estimators have some ideas about the range underlying point estimates, wasting this information is dysfunctional from a ‘clarity efficiency’ perspective. If different users have different views of the range or how they should interpret any single value estimate, this also needs explicit clarification. A ‘clarity efficient’ approach maximises the level of insight communicated for any given level of effort/cost.

Say we can persuade those involved in the discussion to define separate P10 and P90 values in approximate terms which they are comfortable with. We can then observe that a minimum clarity interpretation of these two estimates involves an expected outcome equal to the P50 mid-point in this range. If they are not happy about this inference because it is too crude, we can move from a uniform probability distribution interpretation to a rectangular histogram distribution with three or more classes, in effect generalising a one class rectangular histogram distribution to three or more classes, portraying the asymmetry those involved believe is important to whatever level of precision they feel is necessary. This involves adding complexity which is worthwhile in a clarity efficient manner.

When they are happy with this we can observe the P10 ‘plausible minimum’ is also a suitable ‘stretch target’, to manage opportunity associated with good luck, unless they prefer a separate specification. Further, we can observe the P90 is also a ‘commitment figure’ – the only number to give people who ask for an estimate who do not understand a range based ‘clarity efficient’ approach – unless those managing the selection of a commitment value prefer a separate specification.

Finally, we can observe that using the original point estimate is clearly dysfunctional, because it begs the questions ‘is the estimate a stretch target, an expected value, a commitment value, or none of the above – and how can rationale choices be made if different people see the same estimate differently and use it for very different purposes?’
This is a variant of the approach used to explain the value of interval (range based) estimates to the Highways Agency following the Nichols Report (2007), which lead to a successful re-estimation exercise discussed in Hopkinson et al (2008).

It is important to understand that interval estimates interpreted in these terms are not even addressed by common practice project risk management or the PRAM Guide, because they are ‘off the radar’ of the ‘risk’ concept being addressed, despite the obvious risk to organisations which do not understand these issues. Nor are interval estimates in these terms seen as part of common practice project management based upon using PRAM or comparable guides. Interval estimates and bias issues addressed by authors like Flyvberg et al (2003) fall down the proverbial crack.

This ‘crack’ is actually an ‘elephant trap’, and other things falling down it include effective treatment of ‘value management’ issues in a general uncertainty, opportunity and risk framework.

Interval estimates including all relevant interpretations of single values and bias are central to a best practice approach. To some extent interval estimates were recognised as a useful feature of a PERT approach in the 1960s – it was widely understood that the project duration probability distributions PERT models computed could not be trusted, but PERT-based estimation of activity durations had a wide range of important advantages, including reducing unconscious bias plus making it more difficult for people to lie. Common practice project risk management and dependent project management has somehow managed to lose sight of important lessons we should have all learned from basic texts like Moder and Philips (1970). Part of the explanation may be a disconnect between managing risks and managing plans, a consequence of some people picking up simplified variants of crude 1950s safety management techniques without connecting them to 1960s project management approaches. But it remains something of a mystery to me why inappropriate aspects of common practice have become so ubiquitous.

This framing/stealth assumption approach is directly relevant to on-going discussions of future PRAM and RAMP editions, as well as operations risk management and enterprise risk management (ERM) guides which Stephen and I are involved with. Stephen and I believe there are inherent characteristics of guides and standards sponsored by professional bodies which have of late made them part of the problem instead of part of the solution. The move towards professional bodies marketing education and guides as products, seeking control of the consistency and stability of messages sold as a natural consequence, exacerbates these problems. Further, however those producing guides and standards chose to respond, Stephen and I now believe widespread understanding of the key arguments is absolutely vital, and extensive open literature debate of our longstanding concerns is essential. We hope to provide the tools for open literature critical reviews of all relevant literature, including our own publications and all guides and standards. Two related papers in draft (Ward and Chapman, in progress; Chapman, in progress) are available from the authors for readers of this chapter who are interested.

The working party preparing a third edition of the PRAM Guide started its deliberations in early 2011. I think it is fair to say resolving inconsistencies in the overall perspective and dealing with all relevant uncertainty now has clear majority support, and considerable enthusiasm for generating new insights is available. But there are significant pressures to minimise changes, and whether or not a third edition as participants anticipate it is a viable proposition is debatable for a complex set of reasons.

I think the APM needs to sort the project risk management ‘mess’ before too much board level attention on the broader ‘risk management mess’ damages the position of project managers.

There are some key related choices for the APM and the Project Risk Management SIG. Which directions do you want to move in in terms of issues raised by this chapter?

For example, does the SIG want to ensure that the third edition of the PRAM Guide avoids restrictive framing assumptions, exposes and explores alternative points of view where arguments are
unresolved, and guides users about intelligent choices for concerns which are difficult to address
without extensive experience and conceptual expertise, or is this seen as the wrong direction
tirely from a SIG perspective – and what about the APM perspective?

Should the APM move towards a RAMP perspective or a PMI perspective – they are arguably moves
in opposite directions, raising deep and contentious questions about the meaning of ‘projects’, as
discussed by Morris (2009) and others – and what does the SIG think about this?

Is it feasible to use some negotiated variant of the suggested four lenses and possible further lenses
to produce guides in a manner which restores the very open learning processes of the first editions
of both the PRAM and RAMP guides, or has spirit of enquiry needed for progress led by guides
become too difficult for a range of reasons?

Anniversaries are a good time to celebrate success and learn from successes as well as renewing
vigour for the challenges ahead. They are not a time for brooding about mistakes and lost
opportunities. But if we do not learn from our mistakes we are doomed to keep making the same
ones.

The need to acknowledge and then correct our collective failure to earlier identify and debate
framing/stealth assumptions, including our ‘lens structure’ or some comparable explanation of
different perspectives for different purposes, is the key message of my contribution to this
publication. In my view we need to alter course in this respect. If your radar is fully functional you
will see some serious threats and opportunities associated with project management dependent
upon common practice project risk management. If you do not see them the threats will not go
away, but others will probably capture the opportunities.

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Peter Simon

Introduction and highlights

When I was asked to write something for this publication I tried to remember the time when I was Chairman of the APM’s SIG on Project Risk Management. To be truthful apart from it being in the early to mid 1990s I couldn’t actually remember the dates. I do however remember two main highlights/outputs of my tenure. The first was the production of APM’s so-called “PRAM (Project Risk Analysis and Management) Mini-guide”, which was a short pamphlet that I co-authored with Catriona Norris and Professor John Perry. My second highlight was a workshop at which we discussed and debated the benefits of PRAM and which culminated in a paper by Ken Newland. In addition, in 1995 I initiated the project to write the first edition of the full PRAM Guide, which was published during Ken Newland’s tenure in 1997.

Definition of risk

While musing on what happened or changed during my chairmanship I started to think about the modern definition of a risk event (as distinct from what we now call project risk). The current definition I like best is from the Office of Government Commerce’s (OGC) Management of Risk (M_o_R®), which is similar to APM’s own risk event definition:

“An uncertain event of set of events that, should it occur, will have an effect on the achievement of [project] objectives. A risk is measured by a combination of the probability of a perceived threat or opportunity occurring and the magnitude of its impact on [project] objectives”

What I like about this definition is that it makes it explicit that risk can be an opportunity or threat, good or bad, positive or negative, upside or downside. However this has not always been the case, and certainly not in the world of project risk management, although in the field of economics risk has for a long time been conceived as something that has an upside as well as a downside.

When did risk become good (and bad)?

I tried to work out when we in the Risk SIG first started to talk about risk as being both good and bad and not just a negative concept, and I was certain that it was during my time as Chairman. So I started to look at what documentation I still had from the early days. Let’s look at what I found.

Certainly when I took over as Chairman of the SIG in 1992 we were still thinking of risk as purely a negative concept, and this was reflected in the PRAM Mini-guide. This included the following definition:

**Project Risk Analysis and Management** is a process designed to remove or reduce the risks which threaten the achievement of project objectives.
So it must have been sometime after 1992 that we started considering risks as being anything other than bad. In the first version of the full PRAM Guide published in 1997 we chose the definition of a risk to be “an uncertain event or set of circumstances, that should it occur, will have an effect on achieving the project’s objectives”. Unlike M_o_R we did not explicitly mention that that effect could be positive or negative – were we being deliberately ambiguous or lazy in our description or was it so implicit that we didn’t need to say it?

The first PRAM Guide

I think the first PRAM Guide was, and still is, a very significant work in that it brought together the thoughts of most of the UK’s experts on project risk management, and as a result it both documented and led thinking in this area. It is therefore not surprising that it is here that we find risk as good being first documented.

Having said this, a lot of the first PRAM Guide is written with a negative flavour; indeed at the end of my introduction I quote the definition of project risk management favoured by an old friend of the Risk SIG, Paul Rook:

“Project risk management does not guarantee success but has the primary goal of identifying and responding to potential problems with sufficient lead time to avoid crises, so that it is possible for Project Management to achieve its goal of a successful project which meets its targets”

This negative vibe is continued in the Ken Newland’s introduction chapter with phrases such as:
- “[a project] must predict and manage risks so that when problems occur they can be overcome”;
- “a mitigation plan is invoked only when the potential risk has become an actual adverse event”;
- “[when] risks are identified, a prediction is made of how probable they are and how serious they might become”.

And taken further in Martin Mays’ principles chapter where a risk response is defined as:

“Action to reduce the probability of the risk arising, or to reduce the significance of its detrimental impact if it does arise”.

It is Chris Chapman’s The PRAM Process chapter that breaks the mould and where the idea of ‘good risk’ emerges. In his table of deliverables under identification Chris states:

“All key risks and responses identified, both for threats and opportunities...”.

And further in his explanation of the identification phase he says:

“Opportunities (upside risks and more effective ways of proceeding in general) and associated responses need to be identified and managed with the same resolve as threats”.

So I was right to think that the notion of project risk as both good and bad must have appeared sometime during my tenure, since work on the PRAM Guide started in 1995, and maybe Chris Chapman started it all (although some might disagree).

Risk and the APM Body of Knowledge

In order to validate this piece of detective work I have taken a look at previous editions of the APM’s Body of Knowledge where I found the following corroborating evidence:
1991 APM BoK 1 – From Section 3.8 Risk Management “Risks should be dealt with either by reducing them to an acceptable level or managing them carefully”.

1994 APM BoK 2 – From Section 3.7 Risk Analysis and Management “A risk is considered to be those factors that may cause a failure to meet the three prime success criteria…”.

1996 APM BoK 3 – From Section 3.7 Risk Analysis and Management “A risk is considered to be those factors that may cause a failure to meet the three prime success criteria…” (unchanged from BoK 2)

2000 APM BoK 4 – From Section 23 “While risks are, according to the dictionary, associated with the possibility of failure, they may also be associated with opportunities”.

So from sometime around 1997 or a little before, in the world of APM risk became both good and bad and that’s where we are now. Or is it?

Opportunity or upside risk management in the present day

Fifteen years on from publication of the first edition of the PRAM Guide in which it was first suggested that risk can be good, most organisations I work with still consider risk as being bad. While they supposedly recognise that positive opportunities exist, they generally struggle to identify them. This may be because the dictionary defines risk as the chance of bad consequences, or perhaps it’s because of the traditional association of risk in projects with the health & safety function. Many organisations talk about “risk and opportunity management”, suggesting that risks and opportunities are somehow different, rather than using the phrase “risk management” as the over-arching term for the management of both threats and opportunities. This may only be a subtle difference but it is a further illustration that the concept of risk as good is not totally embedded.

Over the last twelve months I have interviewed a number of risk practitioners in a variety of industries and business sectors and asked them how many opportunities (upside risks) they had in a typical risk register. Around 50% said none and with the exception of one organisation the others said that you would find only a small percentage (<10%). The one exception claimed to have a 50:50 split which I cannot validate but I have no reason to doubt. Ignoring this one outlier, is this lack of good risks in risk registers due to the fact that they don’t exist, or is it because people can’t find them? I have no firm evidence but my instinct is that opportunities do exist in most projects and many of them can and should be found.

In addition I often find that even when companies do identify so-called “opportunities”, in many cases, perhaps most, these are not risks that might happen if left to chance. Instead the things they call opportunities are in reality choices, where we could do this or that and if we did the situation would be improved. Perhaps this is what Chris Chapman was referring to in 1997 when he described opportunities as “upside risks and more effective ways of proceeding in general”.

Why is ‘good’ risk management important?

In 1995 (or thereabouts), when I was first introduced to good risks I remember immediately appreciating that this was a very important concept and something that could significantly benefit project management. So why is ‘good’ risk management important even though many struggle with it both in concept and in practice? To me and many others, the concept of good risk is fundamental to furthering successful project management and the Risk SIG should be proud that it has provoked this lateral and alternative way of thinking. However the progress we’ve made in fifteen years hasn’t
been as dramatic as some of us might have liked, but progress has been made and will continue to be.

Let me close with some thoughts that I use when trying to convince people and organisations that project performance can be significantly improved through the identification of opportunities/good risks/positive risks/upside risks:

- If you only manage those things (risks) that if they occur will have a negative effect on project objectives, then the best you will ever achieve is to finish on time, on budget and deliver the specified quality/performance. Of course if any of these negative risks occur, and their effect is felt, then the project will be late, over budget or deliver lower quality. However if you identify and manage those things (risks) that if they occur will improve the schedule, reduce costs and allow you to deliver higher quality, then this not only means that there is better chance that you will meet your objectives, but it also creates a chance that there will be improvement.

Ken Newland

Then: Jan 1996 – Dec 1997

Ring ring! “Hello, I hear you are the chairman of the APM Risk SIG. I wonder if you can help me. I have just been made our company’s risk manager. Can you please advise me which software package I should buy?”

For me, this repeated conversation reflected the general mood of my time as chair. Everyone was getting on board the risk bandwagon, the train was moving, everyone was excited, this new approach was going to increase profits and boost the business. But unfortunately these people wanted instant results. They needed a turnkey solution that could be done on a part-time basis, something that could be delivered alongside their day job. Their management were looking to this year’s bottom-line. They were not interested in a new way of working simply because it was ‘right’ and helped their customers. So, much of my time was spent explaining the nature of the ‘journey’ rather than a short-cut to the ‘destination’. Not discussing the software capabilities but seeking to find out what they wanted to achieve, what approach they were going to take. How would it be integrated with their normal way of business?

Of course there were the others. Those that believed, who saw the obvious sense in taking a professional approach to avoiding failure. The pragmatists. These were the ones who read about it, who studied risk methods and practices, who ‘got it’. But their management could only see extra cost to chase a worry that ‘might not happen anyway’. They were fighting a losing battle and were treated as ‘the prophet in their own land’. These wanted evidence to convince a sceptical management, to secure a mandate for good. And where we could, we helped.

Between these two extremes were the people who had the opportunity and the support to get to grips with this concept. It was a time when it was possible to use your initiative to effect change and to go where others had not yet been. It was fun and energetic. For me it helped by working within the APM with some of the most professional and tireless people I had ever come across. Risk management was not a job to us, it was a vocation. We lived it, breathed it, and sold it. We were the crusaders. Well, maybe that’s a bit over the top, but we did feel that we were in the vanguard of a movement.

Maybe that is all a bit theatrical for what it was really like. Chris Chapman had made a start and to a large extent we simply followed his lead. But it was still early days and everyone wanted to make a contribution to the thought-leadership.

A lot of this thought-leadership was directed to the development of the first edition of the “Project Risk Analysis & Management (PRAM) Guide”, which was published in 1997 during my time as SIG chair. All the PRAM Guide authors took the lessons we were learning, and the ideas we were trying (and proving) and we offered it freely to our industry and customer colleagues. This was a real act of selfless giving by many people who also made their living from their work and abilities. They literally ‘gave it away’ for the good of our profession.

For me as chair it was also a time of presentations. I was asked to speak at conferences, seminars, workshops, launches. In particular I spoke at the launch of the first PRAM Guide, at the BS6079 launch, and at a major Ministry of Defence risk symposium. People wanted to hear what I had to say, and what the APM had to offer. They wanted vision, leadership and guidance. The first PRAM Guide was getting very good press and I was fortunate to have been in the chair when everyone got excited about it. It was all heady stuff and I am very proud of the role I and my APM colleagues played in it.
Between: 1997 to 2012

Since those early days the practice of project risk management has matured, but also more and more people have learnt about the methods and it has become something that most people understand and, to an increasing extent, practise. It is no longer a subject where people take frantic notes whilst you are talking about it.

It is also worth remembering that from 1997 to date there has been an explosion of computing technology and in particular multi-user networked environments to support whole project teams. For example in the early days a Monte Carlo simulation could take a long time to run. We used to limit the number of runs and the number of activities until we had ironed out the problems, then we would start the big run and let it chug away for ages. Now it’s so swift we can analyse multiple viewpoints and produce graphs, charts, and trends to cover every point of view in a very short time.

Again, I have seen wide extremes of behaviour where the improvements in computer technology and sophisticated risk tools have either been used to good effect or where they have simply smothered the professional insight with reams of data that are not understood - but which look impressive! A presentation to management is now slick and polished, and convincing. But not always a reflection of ‘the truth’.

When we spoke about risk tools we used the term GIGO: Garbage In, Gospel Out. People can get blinded by the science, the maths, and the graphs, and lose sight of what it all means. It is still only as good as the insight that goes into the primary data and the pragmatism applied to understanding the output. I think that despite the increasing use of these tools we still see that too little objectivity is being applied.

The other thing I have noticed is that nowadays customers and management specifically ask for formal risk management. It is built into the process. But this does not always mean that risk management is undertaken any better. Along with many other aspects of governance-based requirements, there is a tendency towards box-ticking rather than problem prediction and resolution. There seems to be a general trend towards mechanisation of the intellectual sciences, and I fear that as a result we sometimes lose the essence of what it is about. People seem less grounded.

And I still find that implementation of mitigation plans is patchy at best. When it comes to spending scarce resources on mitigation activities or on project deliverables, it is most often that the project activity wins. And who can blame the hard-pressed project manager who needs to make deliveries to the customer in order to support the business cash flow? Especially when most project cost/time overruns are not caused by things that are in the risk register.

During this period we have seen the Risk SIG and the Earned Value Management (EVM) SIG get together to produce a guide on how the deterministic notion of EVM and the probabilistic emphasis of risk management can be brought together to provide yet greater insights into how a project might turn out. If properly understood, such techniques can really help inform decision making. This is real thought leadership even though for many real-world situations they are more than can be addressed.

Another aspect that has grown is opportunity management. The positive side of uncertainty. As most of my work over the period from 1997 to date has been in the area of competitive bidding I have not had much opportunity to address opportunity risk. This is because during the bid phase most opportunities that are identified tend to be used to improve the competitiveness of the offer, leading to increased risk rather than future opportunities.
We have also seen the PRAM Guide go through a second iteration in 2004, and another update is currently underway. The PRAM Guide still enjoys a privileged position even though there are many other good contenders providing guidance to project risk practitioners.

So all is well then? Well not really. Projects are still going over budget, are coming in late, and often failing to achieve the level of performance anticipated. But what is worse, it is not often that it is the occurrence of identified risks that has caused this. I don’t believe that this is because risk management is failing projects, I suspect that project managers are actually getting much better at creating solutions that are more ‘risk avoiding’ and less prone to event-risk failure because project managers are now much more ‘risk aware’. But what seems to be happening is that there are categories of potential failure that are not being identified as risks for various reasons. And I believe that these areas will (should) be better addressed in the future.

The future: 2012 onwards

Event risks associated with the tasks to be done are generally the easier type of risk to identify and address. In my view it is the endemic or systemic risks that seem to be being routinely missed or overlooked or ignored.

Because much of my work is in the business development world the most challenging area I observe arises from the inherent dynamics of the bid phase. Bids are a competitive environment with the customer comparing alternative bids on which offers the best price, delivery and performance. Bid teams know that unless they offer the best in all categories they may lose the business to their competitor. And for many businesses the repercussions of losing can be serious. There is a lot of business pressure to secure contracts and, whilst not ‘at any cost’, it is naturally causing bid teams to be as optimistic about what they can achieve as possible. This optimism often manifests itself as all activities being planned to be as short as possible and each with the minimum of planned resource.

The very short bid response timelines also makes it difficult for bid teams to fully analyse what needs to be done, further increasing the tendency to expect the best outcome. Of course bid teams are not ignorant of this issue, but the more they capture the uncertainties the higher the contingency becomes, and the higher the price the greater the chance of losing the bid. So in many cases it remains ‘the elephant in the room’ that everyone knows but nobody admits to seeing.

Once the contract is awarded the project/delivery team most often finds that the overall effort estimates and timescales are simply too tight for the actual job. Describing each of these as an ‘event risk’ is unrealistic and so naturally more progressive techniques will need to be used. It is my expectation that a more integrated planning with uncertainty will become normal and will develop more routinely into a branch of risk management that is different from what we usually see. Perhaps we could call this the ‘risk of uncertain estimating’. The approach to handling this branch of risks will need to be different within projects, but will likely use some similar tools. None of this is new to the risk or planning worlds but it is not as routine as I think it will (must) become.

Another challenge is the impact of management decisions. Within any large multi-project enterprise there are options to be considered, priorities to be weighed up, and compromises to be made. As a result a project may, through no fault of its own, be on the receiving end of the ‘wrong’ decision. These too cannot readily be identified as risks and the mitigation is often not in the hands of the project manager. And of course some decisions made outside of the project can simply be wrong management decisions, frustrating all efforts of good project and good risk management.

I think that the way that risks within the supply-chain are handled by prime contractors will also need to change. The common commercial practice of pushing risks to the supplier, thus forcing them to increase their contingency, is going to be less and less viable. Future prime contractors will need to shoulder the whole of the risk to ensure they have the flexibility to cope with whatever comes
along without having a project cost that is too high. This will impact on the nature of the relationship between prime and supplier requiring greater openness, honesty, pragmatism and support. This in turn needs better interpersonal skills and more enlightened commercial and project management. And of course much of the responsibility will rest on the shoulders of the risk specialists. Greater levels of personal judgement may be needed and less reliance on the mechanics of bid management processes and tools.

Overall I feel that as risk management and implicit risk circumstances get better managed, project budgets inevitably will get smaller and this will lead to less flexibility for the project manager. This means that project management skills will need to be ever more refined and honed and this includes the sensitive, intelligent and integrated use of risk management.
1998-2000: PRE-MILLENNIAL PERSPECTIVE

David Hillson

Looking back over my twenty-five years of involvement with the global risk management community, two quotes seem to sum up my experience. The first is L. P. Hartley’s opening line his 1953 book *The Go-Between*: “The past is a foreign country; they do things differently there.” But I also agree with the French when they say “Plus ça change, plus c’est la même chose.” Much has changed in the world of risk management, but a lot is still the same. And the APM Risk SIG has been part of my journey throughout that time, along with other professional risk organisations (notably the Institute of Risk Management, the INCOSE Risk Management Working Group, the former PMI Risk SIG, and the current PMI Risk Community of Practice). I have learned most from my interactions with people along the way: clients, colleagues, collaborators and competitors – including several past chairmen of the APM Risk SIG. In reviewing and recording my own “view from the chair” as a past SIG chairman (1998-2000), I’ve been struck by the number of significant interactions between my own story and that of the SIG and some of its leaders.

Two intertwined stories

I first heard the word risk in a project context in 1985, when I was a junior project manager in a leading UK engineering company working in the defence sector. Around this time the UK Ministry of Defence (MoD) issued instructions that all defence programmes must use a formal approach to risk management, and my project was chosen to pilot this new development in our company. [This was the first step on the journey that led to the emergence of the Risk Doctor as a global brand, but that’s another story!]

Our first attempts at project risk management in my company were rather limited, and we drew heavily on two key sources. The first was the work of Professor Chris Chapman in the North Sea oil sector, which was very influential as the defence industry sought to learn from the experience of others in implementing risk management. I remember listening to Chris at several conferences, and trying to work out how to translate his examples into my projects. Thanks to Chris I discovered “pigs and buckles” and the risks of laying pipes using barges designed for different wave-heights. This was very interesting, but my challenge was to work out how to apply this to real-time software-intensive naval command systems. Chris was also the founding chairman of the APM Risk SIG (1986-92), which is how I came to attend my first SIG meeting.

The second major influence over the way we developed risk management within my company was the risk consultancy Euro Log, who were among the first to bridge the gap between the energy and defence sectors. My first experience of risk training was a course run by Euro Log in 1985, where I met Philip Rawlings, their Technical Director (who went on to chair the APM Risk SIG from 2000-2002). Euro Log were also the UK agents for a powerful quantitative risk analysis tool called PROMAP V, which we used for Monte Carlo simulations.

This led to an initial emphasis in our risk management approach on quantitative risk analysis as a means of evaluating the overall effect of identified risks on either project duration or total cost. We quickly developed this into an integrated cost-schedule risk analysis with sophisticated use of stochastic branches, dependency groups, probabilistic resource-levelling, alternative calendars etc. Very soon my company was using risk-based pricing for every major bid, with contingency amounts calculated from our risk modelling. We also set all major milestones based on the risk analysis, and we used ongoing risk reviews during project execution to help us stay on track. We even developed a way to link our risk analyses with our earned-value analysis, which was very advanced for its time.
Our use of risk-based decision-making on our projects led to interesting discussions with the MoD advisors from a technical consultancy called Quintec, whose responsibilities included checking the contractor’s risk assessments. Coincidentally Quintec was co-founded by another future APM Risk SIG chairman, Ken Newland (1996-97).

It was about this time in the late 1980s that I met Peter Simon, who chaired the APM Risk SIG from 1993-95. Peter presented a paper on practical project risk management at a user conference, and I liked his down-to-earth approach, so we incorporated much of it into the way we managed risk in my company. By this stage we had learned how to produce a robust risk register that captured a wide set of risks to the project, and combine that with a rigorous quantitative risk model to indicate the effect of those risks on overall project outcomes. This integrated qualitative/quantitative risk approach was very powerful in focusing our project teams and senior management on the main risks to the project, and in helping us to address these proactively.

Like others in the defence sector, we initially did risk management because we were told to by the MoD who were our major client, but we really found it helpful in spotting potential problems sufficiently in advance to be able to manage them proactively. By 1990 we were convinced that effectively managing risk was a major contributor to successful projects, and we did it because it worked. I’d also realised that I found the risk field fascinating and I decided to pursue it as a career. This led me to develop closer links with the APM Risk SIG, including a period as SIG Secretary (1994-97) and chairman (1998-2000).

**My view from the Chair**

My time as SIG chairman coincided with a growing interest in risk management in projects, partly driven by concern over the millennium bug. Many people remember this as “the risk that never was”, confirming suspicions that risk management encourages people to worry unnecessarily about things that may never happen. Others see the Year 2000 IT project as a risk management success story, when prompt proactive action effectively removed the threat before it could occur.

Apart from the millennium bug, two other significant developments occurred in the risk world during my period as SIG chair, neither of which hit the headlines. The first was a growing acceptance of the idea that not all risk is bad. The concept that “uncertainty that matters” includes both threat and opportunity gained increasing prominence, and organisations began to implement an extended integrated risk process to manage both together. While some saw this as a major new development, others realised that it was merely a rediscovery of the original double-sided concept of risk that had always existed. We have always known that opportunities exist and that they can be identified, assessed and managed through a structured process, but we had failed to connect this with the risk concept of “uncertainty that matters”. Around the change of the millennium the risk world woke up to the upside of uncertainty and began to address opportunity in a more intentional way. The broadening of the risk definition to include both threat and opportunity was somewhat controversial when it was first proposed, but it became accepted as mainstream in the subsequent decade, to the point where it is now embodied in the ISO risk management standard, ISO31000:2009 “Risk management – Principles and guidelines”, as well as in other standards and guides. It is now commonplace for major organisations around the world to use an integrated risk process that aims to minimise threats and maximise opportunities, although some remain to be convinced of the value of this approach.

The other major advance was rather less evident to the casual observer. In 1997 APM had published the “Project Risk Analysis & Management Guide”, known as the PRAM Guide. This was co-edited by the past, present and next Risk SIG chairmen, namely Peter Simon, Ken Newland and myself. In less than 100 pages, the PRAM Guide offered practical guidance on how to manage risk in projects, written “by practitioners for practitioners”. Shortly afterwards, the global Project Management
Institute (PMI) launched the latest four-year update cycle for “A Guide the Project Management Body of Knowledge” (or PMBoK® Guide), which includes a chapter on project risk management. The risk section of the 1996 PMBoK Guide was widely acknowledged as being behind the times, and PMI decided to rewrite it completely. By happy coincidence, I was invited to join the core author team for the new PMBoK Guide risk section, and I persuaded my fellow authors to adopt the PRAM Guide risk process as the framework for the revised PMBoK risk chapter. As a result, when the revised PMI PMBoK® Guide was published in the year 2000, its risk section closely matched the approach recommended by the 1997 APM PRAM Guide. This produced alignment in the way risk was managed on projects, and provided a firm foundation for development of consistent practice across a wide spectrum of industries and countries – a consistency that persists to this day.

Despite its small size, with about 320 members at the end of my term as chairman, the APM Risk SIG certainly punched above its weight around the turn of the millennium. The PRAM Guide became influential outside the UK as project professionals sought practical how-to guidelines to help them implement risk management on their projects. The SIG forged links with other risk-related groups, notably in PMI and INCOSE, and we undertook a number of important projects together. Our quarterly SIG meetings and workshops addressed key topics and generated new knowledge for the discipline as our members freely shared their expertise and experience. All this culminated in the Risk SIG being recognised by APM with the “SIG of the Year Award” for 1999-2000.

**Project risk management then and now**

Looking back at those early days and comparing with how risk is managed on projects today, there are some clear differences in project risk management and in risk management more generally, as well as a few things that remain depressingly the same.

One major improvement has been the software tools that are now available to support the risk process. I wrote my first risk register programme using dBase III in the days before desktop computers, and I had to construct a detailed text file containing quantitative risk analysis input data which was telexed to a bureau running Monte Carlo simulations using PROMAP V on a water-cooled mainframe in Houston! Today’s risk tools are cheap, fast and reliable, with powerful functionality and great user interfaces.

Another key difference has been in the scope of the project risk process. In the early days we were only interested in threats to project time and cost. Now it is common for the risk process to be used to identify opportunities alongside threats, and impacts are assessed against other project objectives as well as the project schedule and budget. Use of a risk breakdown structure (RBS) has helped us to consider multiple sources of risk, not just technical risks, which used to be the main focus. We also now consider a wide range of uncertainties that might affect outcomes, and this is not limited merely to uncertain events.

A much more integrated risk approach is used these days, particularly in the way quantitative risk analysis is performed within the risk process – in the old days it was done separately in isolation from the qualitative assessment recorded in risk registers, but now we recognise the importance of aligning both qualitative and quantitative risk analyses. Another important recently-developed level of integration is between the way risk is managed at various levels in the organisation, developing a true enterprise-wide approach to risk management.

Finally on the difference front, project risk management has become much more common, with wider application across all types and sizes of projects in all industries. The emergence of consensus on risk concepts, terminology, methodology, techniques and processes has encouraged the view that managing risk is a natural part of project management, and many more people are doing it, at least to some degree.
Unfortunately however, some things have not changed much from the early days, despite great improvements in tools, techniques and processes. These unwelcome similarities mostly relate to the culture surrounding risk management in today’s project and business environment. For example it is still all too common to find project teams and management boards who are merely going through the motions, “doing risk management” instead of actually managing risk. They follow their risk procedures by rote because it is required by the quality system or by a client contract, but they show no commitment to action and no understanding that managing risk is supposed to add value to the project or support better decision-making in the business. Instead risk management seen as additional cost, an optional extra, and a necessary evil to be endured and got through as quickly as possible. This is often reinforced by senior management who tend to view risk management as a technical function done by engineers, with no relevance to the business case or the value which the project is intended to deliver. Even worse is when risk management is seen as separate discipline which is performed by risk experts, and not integrated into the overall management of the project or business.

And next?

We’ve taken a look at how project risk management has developed in recent years, at least from the limited perspective of one person. But what of the future? In the short-to-medium-term I expect to see significant progress on four important areas relating to the management of risk in projects. A start has been made on some of these developments, and some people and organisations are further ahead with them than others. But I anticipate each of these areas becoming embedded into the mainstream understanding of how project risk management should be done, supported by a robust conceptual basis, effective application techniques and appropriate infrastructure.

1. Firstly it is essential that the project risk process should not be limited to uncertain events that may or may not occur in the future, but it must also address other types of risk. The limitation has partly arisen from lazy use of the term “risk event” as shorthand for all types of risk, leading many (most?) risk practitioners to think only of uncertain future events when they identify risks in their projects or business. Of course risk does include uncertain future events, but there are several other important dimensions to the phrase “uncertainty that matters”.

One way to ensure that a broader view is taken is to use alternative words to describe different types of risk, for example variability and ambiguity. Where an event or activity or decision is planned but there is uncertainty about some of its key characteristics, then variability is the appropriate term. But where we are uncertain about what precisely might happen, if anything, then we could describe this as ambiguity. Both variability and ambiguity are types of “uncertainty that matters”, and both should be encompassed by the risk process. Alternatively we might describe different types of uncertainty using the terms epistemic (uncertainty in knowledge), aleatoric (uncertainty in outcome) and ontological (conceptual uncertainty). Whichever terms are used, it is important for the risk concept to be extended beyond uncertain future events, and for the risk process to include techniques to identify, assess and respond to these other types of “uncertainty that matters”.

The way risk is understood and managed must also be extended to take explicit account of a concept newly introduced in the second edition of the APM PRAM Guide, namely “overall project risk”. This was defined to provide an answer to the question “How risky is this project?”, where the answer cannot be derived by simply summing or combining the individual risks within the project. Overall project risk is a powerful idea, but the process, techniques and language to deal with it effectively are not currently well defined or widely used.
2. A second major area where project risk management needs to improve is in more effective integration with other project disciplines. The links between risk and techniques such as estimating, scheduling or resourcing are clear. But considerable synergies can also be achieved through linking risk management with project techniques that are usually conducted in parallel. Key examples include: value management, which often includes a risk element, but can also provide a useful focus on possible upside opportunities; earned value management, where forecasts of future project performance should take account of risk; management of contingency and management reserve, which are clearly related to both threats and opportunities in the project; and benefits management, since these represent the ultimate measure of what is at risk.

3. Management of risk in projects is well established and the approach is fairly mature, at least in theory if not always in practice. However projects do not exist in isolation, but are executed within the wider context of the organisation. Similarly project risk management should not be performed as a stand-alone exercise, but should interface with other levels within the organisation where risks exist. Where a full enterprise risk management (ERM) approach has been implemented, then project risk should form an integral part of this framework in terms of both management and reporting of risk, using a common risk language and process.

When considering how to interface project risk management with other risk dimensions, particular attention needs to be paid to the areas nearest to projects, namely the programme/portfolio level which forms the context within which projects exist, and the operational/business-as-usual level into which projects deliver capability through products and services. Clear boundaries must be established between these levels, with agreed lines of accountability and responsibility for managing and reporting risk exposure.

4. The final area where project risk management must develop and improve is the way the people aspects are handled. Risk is not managed by processes, tools, computers or databases; it is managed by people. But human beings are not dispassionate actors who make rational choices in every situation. Instead we are complex composites of multiple levels, and our behaviour is affected by a wide range of influences, including both visible and hidden. This is particularly true when we are making decisions in situations that we perceive as both risky and important.

Unfortunately, although we know this to be true, project risk management as commonly practised takes little account of the people aspects, and simply relies on the implementation of a robust process. As a result, our decisions, responses and actions are coloured by hidden influences that operate at both individual and group levels, leading to unexpected and sometimes inappropriate outcomes. We need to develop a proper understanding of risk appetite, risk attitude and related concepts, leading to practical and proactive management of these aspects within the risk process.

So looking back over my past twenty-five years of involvement in risk management, most of which have been spent in the company of the APM Risk SIG, considerable progress has been made in some areas, notably the technical aspects of the discipline. But there’s still some way to go before risk management is seen to deliver on its full promise as a major contributor to project and business success. Fortunately professional organisations like the APM Risk SIG will continue to play a vital role in spreading best practice as well as providing a platform for the development of new thinking and improved approaches. Like everything else about the future, the way that risk management will develop in the coming years remains uncertain. But as risk practitioners we should expect nothing less!
Early days in risk management

A very long while ago, in 1975, a company called Euro Log Ltd was founded in the UK to offer risk management services; Decision Support Services we called it then (I will come back to that later). At that time risk management in the project sense was a novel concept; we had always to explain what we meant by the term and the discipline when trying to win new converts and customers.

When I joined Euro Log in 1977, risk management meant quantitative risk analysis. We used one of the few risk analysis programs available and ran it on a time-shared computer in Rockville, Maryland, USA; remember, this was long before software applications became ‘apps’, and personal computers hadn’t yet been invented (they did not arrive until about 1982). The risk analysis program was called PromapV, a simulation program written by a spin-off group from UCLA. We input data on punched cards and sent data over the Atlantic on a 300 baud modem – about 1/40,000 of what we expect from the Internet today. Incidentally, the founders of Primavera were also users of that same software (the only other user was the company that wrote the software, Log/An Inc.) – Primavera later bought PromapV and re-branded it as Monte Carlo.

Few other risk analysis programs were available, being either PERT models (a simplistic risk approach now hopelessly diluted and pretty much discredited) or general-purpose simulation programs which, although very powerful and flexible, did not easily cope with a project environment, based as it is on a plan, cost estimate and an economic model.

Euro Log focused then mainly on the achievability of plan timescales and budgets – mainly on high-capital cost projects. The high cost of computing when only main-frame computers existed and the novelty of the approach seemed to keep away all but those exposed to high-risk, high-exposure ventures. We built models of project plans incorporating time, existence and resource uncertainty, albeit with a limited number of distribution types available to us. Computing was expensive but we could and did model a lot of esoteric uncertainties (weather effects, complex pipe-laying scenarios, repeating tasks, plant breakdowns etc.)

In those early years, we were almost alone in offering risk management services in UK and Europe, certainly as a specialist company, although a few individuals were practising the speciality (as it was then).

I spent (and am still spending) many years working for clients in a wide range of industries; for example, oil & gas, energy, pharmaceuticals, railways, aviation, defence and a bit of IT. The common need was and is to know what might upset the project plans and therefore what effect might be seen on the viability of the venture. Although the clients and projects were varied, the risks were remarkably similar – which is where a generic risk breakdown structure comes in handy. Most risks either come down to the failure of people to do what they should, to find out what they don’t know, to acknowledge what they can’t know, or risks arise from the failure to acknowledge these shortcomings and to allow for them as contingency or fallback.

The Risk SIG

A former colleague encouraged me to join the APM Risk Specific Interest Group (SIG) soon after it started in 1986, so I joined the SIG and then the APM as a member in 1987, then as a fellow in 1996.
In 1987, there were just a handful of risk practitioners in the Risk SIG, and by then the discipline was broadening out, and including a more qualitative approach which took us into considering a framework into which to place and formalise risk management – which meant defining terms and processes, then contextualising those in risk management plans and procedures.

Qualitative risk management – the identification and ranking of risks – became a focus for many (and the only view, for some). Of course, we all then became exercised by definitions of risk, uncertainty, threat and all those things and even the name for the discipline itself: risk management, uncertainty management and so on. These discussions prompted the idea of the Project Risk Analysis & Management (PRAM) Guide, published in 1997 (with a second edition in 2004).

The PRAM Guide introduced a cyclic process, namely Initiate $\rightarrow$ Identify $\rightarrow$ Assess $\rightarrow$ Plan Responses $\rightarrow$ Implement Responses (to which I would only add a close-out step to examine the success of the process and its maturity, and to identify any changes or improvements considered to be appropriate). This process, or something very close, is essentially at the core of every other risk management process proposed in the many standards and procedures put forward ever since.

I was elected as chairman of the Risk SIG in 2000 for a two-year stint, shortly after the first edition of the PRAM Guide was published, and this was probably the peak of activity in terms of the release of standards and guides concerning risk management.

Then, as now, the Risk SIG had as its remit the dissemination of knowledge concerning project risk management – keeping up with developments in the discipline, sharing experiences in the implementation of risk management, listing tools as they become available to assist the practitioner. Inevitably, as individuals come and go, material is repeated and old discussions are resurrected, but that is no bad thing – we want to keep the discipline fresh.

**Are we losing our way?**

The discussions that have been rolling on for the last 40 years or so as to how we define our terms has for many, I believe, become a distraction that takes us away from getting on with the job. I sway towards the view that I don’t particularly care what it’s all called – the real issue is dealing with ‘uncertainty that matters’ – not my words, but thanks to David Hillson for this turn of phrase. There are things we have an incomplete grasp of (and always will), either because we are ill-prepared or because what the world throws at us can only be imprecisely forecast (like the weather, the state of the economy several years hence or how real people will perform a task a week next Thursday); if our guess is too far off the mark, the chance of achieving the objectives we set out for ourselves could be compromised – if the variance is significant we need to find ways of dealing with it. That’s it, in a nutshell!

The risk bit consists of things that will happen or may happen and, if they do, we are unsure of the extent of the impact – we will buy a compressor, we don’t know what it will cost yet; we may encounter poor industrial relations, we don’t yet know the chance of that or the delay if it happens. The tricky part comes in translating all this into a method of working that can be communicated, executed and subject to scrutiny.

The situation now seems to be that we have a plethora of risk management standards (most of them of some use, none of them overwhelming the others), many company-written procedures (ditto), some plans, little action. The practice of project risk management I would hold to be variable to the point of disappointing – it is time we moved into the business of upping the risk maturity of more organisations in the project world. We have found a frightening lack of risk maturity in some organisations purporting to be adherents of risk management but actually offering little more than lip-service; a serious threat to tax-payers and shareholders’ interests.
The ‘toolbox’ that we all use to support our risk management activities has seen quite a few changes over the years – but, on the other hand, not much has changed.

We now have several qualitative tools; that is some software to assist in organising the collection of risks, probably in the form of a relational database, some means of differentiating major from minor, and somewhere to record mitigations and contingencies (that is, what you intend to do about your risks or what you allow should they happen). What changes, and what makes one tool more attractive than another, is how effectively that tool can be implemented and how well it communicates the risk culture throughout the organisation. It’s also important to be sure that you can afford it – but don’t be tempted to spend far more than the cost of a commercial tool to develop an in-house bespoke tool that is so particular to your outfit that it will quickly become obsolete!

Quantitative tools (software that can be used to analyse the cumulative effect of the significant risks we have identified) have come and gone – but still we are pretty well focused on software that starts with a project schedule or cost estimate and allows the analyst to consider each aspect of the model (duration, resource, cost, revenue, occurrence) as an uncertain variable. Most of these tools fall into the two camps of spreadsheets (either on their own or add-ins to MS Excel) or critical path method models (again, standalone or add-ins to MS Project and other planning tools).

It would be comforting to think that after some 40 years of software development there are standard tools to support risk management. This is not yet the case and the lack of outstanding tools is evident in that there is still market-room for others to offer what they see as improvements.

To get back on track

There is one aspect of project risk management as perceived by some that worries me. I am often asked questions like “How accurate are risk analysis forecasts?” or “How good do your forecasts turn out to be?” As I mentioned earlier, our company used to have the by-line ‘Decision Support Services’; I believe this shows a better focus for what we all in this business are trying to do. We should be looking to see what issues might frustrate our enterprise, see where we might arrive if those issues are not handled effectively, and understand what we have to do to be surer of a satisfactory outcome. A static forecast such as “You have a 30% chance of being run over today” is neither appropriate nor particularly useful. Project risk management is most useful, effective and, dare I say, rewarding for the practitioner, when the analysis is used to support decisions and actions that keep the venture on track; when the analysis highlights potential problems which can then be tackled or allowed for; also, when it prevents the project team from acting on perceived threats that turn out to be of minor significance to the venture as a whole.

“Honesty is the best policy”, first in recognising the risks, then qualifying or quantifying the likely occurrence and impact, and then providing sufficient funds to tackle the risk or to allow for it. I see too many organisations forced into implementing risk management but preferring to sanitise the analysis in the mistaken belief that the organisation would be better served if a rosy picture were painted – sadly, potential threats become actual issues because their prevention was never planned for.

On a more positive note, many organisations are committed to formalise and implement risk management, and to appreciate the benefits that can accrue – not the least, a better understanding of the venture and an appreciation that what will happen is not necessarily what the prospectus states.
A bit of background

I was fortunate enough to begin my career working with Dr Terry Williams and Dr John Bowers in the excitingly named Software Tools, Artificial Intelligence and Systems Studies Group, at YARD Consultants in Glasgow. Having just graduated with a degree in operational research, I was keen to get out into the ‘real world’ and apply my analytical decision-making skills to the real life projects.

Terry and John had been leading the development of ‘RiskNet’, one of the first quantitative risk analysis tools written for the PC. RiskNet used Monte-Carlo simulation modelling of triangular distributions representing project activities, to determine criticality and ‘cruciality’, and to generally help us aid our clients in understanding the complex relationships that may impact the success of their undertakings.

This was the start of my career-long involvement with risk in major programmes. Large, complex technology programmes were the main beneficiary of our tool and our consulting time, and I was fortunate to work on submarine development programmes, geothermal energy designs, multinational ship procurements and armoured vehicle development programmes. These programmes also included the UK Surface Ship and Submarine Command Systems projects, the largest software developments in Europe at the time.

By the time I stood for the position of Secretary, and then Chairman of the APM Risk SIG, I had joined Deloitte as a the project risk specialist in a team of risk practitioners focused on helping clients understand and manage risk across their enterprise. But let’s take a step back to how I viewed the discipline of risk management 20 years ago.

‘Risk’ is a great word, in my opinion. It conjures up images of living dangerously, taking your chances, considering whether your actions may lead to a greater prize, or to ultimate destruction. Card players, investment managers, track-side punters, clinicians, F1 drivers, engineers, parents, naughty school children; we all understand what risk means to us. Personally, if someone says ‘risk’ to me, I still first think of the board game that I played for hours on end as a child, strategising over whether to hold Australasia or South America, or expand to the great continents of North America and Asia!

When I first started working as a ‘risk consultant’, people in pubs or social gatherings would ask, “What do you do?” “I’m a risk manager” never quite worked. “So what does that mean?” That would be when the problems really started. “I help people manage the risk in their projects. Help them achieve successful project outcomes. Try to make sure things don’t go badly wrong”. On rare occasions this would spark a degree of interest and “We could have done with some that on our new project – that was a real disaster!” On others it would be a slightly glazed-eye nod and a quick exit from the conversation. However, more often than not, there was a degree of hostility that originally surprised me, but then it became something I was accustomed to hearing. Everything from “You’re one of those *@!$%* who mean that I have to fill out a dozen forms before I can take a group of school kids on a trip to the farm”, to “Who are you to tell me how to run my projects – I’ve been doing big projects for 25 years!”

This was pretty tough feedback from people I’d never met before, when all I was hoping to do was have a quiet pint. However, there were a number of important lessons that have stuck with me over the intervening years:
Not everyone is ready to embrace project risk as a discipline
Experience, important though it is, can be a barrier to effective project risk
Project risk as a discipline is often viewed as ineffective bureaucracy
There are many advocates of project risk, and indeed project assurance, but they often sit outside the project
It’s better to tell people at social events that you’re an ex-Olympian rather than a risk consultant – they generally find that more engaging!

Project risk in my time as Chairman

Project risk at the turn of the century was a discipline that seemed to be very much on the up. We had been through a period where early pioneers had blazed a trail and the appetite for project risk services was high, and there were many tools and techniques available to practitioners.

Increasingly, large public sector programmes required project risk management. In particular, defence programmes would have very detailed requirements for a formal approach to managing project risk. A project risk manager was often mandated and there were specific requirements for project risk registers and quantitative risk analysis of target milestones. In much of my experience however, there was a slight detachment from the world of the risk manager and his risk registers and models, and the real management of the project. Project risk often focused on how technology risks would impact programme schedules, but it could on occasions seem remote from the commercial negotiations, from the steering committee meetings, from the decision-making of the technologists.

This wasn’t true of every project however and I had some great personal experiences of very effective project risk management. I identified three critical factors in those successes:

- Firstly, a project sponsor (and steering committee) who were fully engaged in the risk process, who evangelised about project risk and who led by example.
- Secondly, key decision-makers in the project team (Chief Technologist, Project Manager, Commercial/Finance Manager) who took risk seriously, and ensured that managing risk was integral to their day-to-day activities.
- And thirdly, a senior, experienced project risk manager, suitably empowered and with the credibility amongst the senior project team to effect decision-making and use the project risk discipline to make a difference.

I’m sure we have all had experience of project failures and successes, perceived or otherwise. I have been involved in projects where all the disciplines were evident. The project management tomes had been read and applied. The risk register was in place and maintained. But nonetheless it just wasn’t working. I have also been involved in projects where there was little evidence of any real discipline, yet somehow everything seemed to come together. It’ true that the latter were rare, but they did happen, and it was this that interested me most and led me to focus more on assurance of projects and the link between identifying risk, providing independent assurance and helping projects succeed.

To return to my three success factors, one of the challenges I noticed for many risk managers was that they were out of their depth. All too often, the role of project risk manager was given to a junior member of a PMO, or in some cases to an admin assistant, whose remit was just to make sure the risk register was updated. Often the role would be part of a PMO that had little more than a monitoring function. Risk might be on the agenda of programme board meetings, but it was rarely addressed. All the great tools and techniques that had been developed in the last years of the 20th century were getting little use outside the construction and defence industries.
Why did this happen? Perhaps because budgets were being squeezed and that meant little appetite for investing in ancillary project services. In some industry sectors where budgets weren’t under such scrutiny, it may have been easier to throw money at problems than to invest time and effort in setting up for success at the start. Some industries still retain the culture of rewarding the heroic fire-fighter above the steady, safe pair of hands. Did this have something to do with it?

It seemed to me that in the nineties, there was great interest in new tools and techniques for analysing and assessing risk in its many guises. At the time when I was chairman of the Risk SIG, it seemed that we had moved on. We all understood the tools and techniques available to us, and if we didn’t we could ‘Google’ them (or perhaps ‘AltaVista’ them). No, our members seemed to get most benefit from the real-life examples of risk managers overcoming the hurdles and barriers to effective risk management. The tips and tricks of “How I made the project director listen”, “What I did to get the attention of the project sponsor”, “How I gave assurance to the CEO”.

Project risk - A personal outlook on the present day

Google has an interesting search tool called Ngram viewer. If you type in “project risk” or “risk”, the results show a huge increase in usage between 1980-2005. The “big four” professional services firms all have significant dedicated service offerings and indeed business functions which bear the word “risk” in their titles. It may therefore be right to assume that “risk” is widely understood and furthermore that managing risk “sells”. It is noticeable how many people now acknowledge the importance of “unknown unknowns”, the phrase which led to a great deal of derision when used by former US Secretary of Defense, Donald Rumsfeld.

What do large organisations undertaking large projects and programmes want from their risk advisers and in-house risk teams? Project success may be the first and most obvious answer, but surely only the very arrogant or the very foolish would claim to guarantee project success, particularly in novel and complex endeavours.

More commonly, such organisations are either seeking assurance that the risks in their endeavours are being addressed appropriately, or they require an independent view of their project in order to highlight weaknesses in project strategy, project approach, or project management controls. Project risk is central to this, but management of risk must sit beyond the PMO and the updating of the risk register. Project risk is one of the key project controls, but it is rarely considered to be enough to satisfy the senior stakeholders in organisation-changing programmes.

One of the changes that I’ve witnessed in the past 20 years or so has been the way in which project management services have been commoditised. There are many PRINCE2 or PMI accredited practitioners in industry. Most large organisations follow these methodologies, or adapted versions of these suited to their own organisation. Off-the-shelf project managers, or indeed whole teams, are readily available, so it might be fair to say that there is no real excuse for projects failing to have the correct project management disciplines in place, including risk management.

Despite the abundance of project management skills in the marketplace, there are still frequent examples of disciplined project managers and teams failing to make a success of a project. In some cases there are events that will be outside their control, as recognised by Mr Rumsfeld, but in these cases the important thing is how you react to an event, not the event itself. Perhaps if we required steering committee members to undertake pertinent risk training we may increase our success ratios?

The “three-lines of defence” model is a familiar approach to managing risk and seeking to gain assurance. Common in the financial services industry, the first line of defence describes the controls in place to address daily operations. This means that fundamental processes and systems should be designed in such a way as to mitigate risk. In the world of projects, we could view this as basic
project management discipline with the PMO being charged with ensuring the effective operation of these processes.

The second line of defence in many organisations will be the risk quality and compliance functions. Different industry sectors face different challenges and will have other second line functions pertinent to their business, such as safety or technical centres of competence, or indeed central programme functions. These functions will commonly own the processes employed across the business and be charged with ensuring that these are adopted and applied effectively. A central programme assurance function has a key role to play in managing risk on projects and programmes without being directly involved in the project itself, and will often be accountable to senior executives.

Finally, the third line of defence is where the independent assurance sits, most commonly as an internal audit function reporting to a board audit committee. Over the years the internal audit function’s role has moved beyond an old world view of ‘expense-checkers’, to one where they provide that important last line of defence. Increasingly, this third line of defence is taking an active interest in project risk.

Challenged, failing or failed projects don’t necessarily result in merely a few weeks slippage, or a wasted bit of investment; they can be critical to an organisation’s livelihood. They may drain resources to a point where business operations are less than effective. They may have significant implications on operations if ‘go-live’ activities fail. They may consume huge amounts of capital expenditure for very little return. And they may result in significant law suits, reputational damage and tarnished careers.

These potential outcomes can be caused by a variety of risks that aren’t easily managed by the humble risk register or within the PMO. They need board level attention, and should prompt senior sponsors to seek assurance that their projects are effectively managing the risks.

The future of project risk

It is a brave writer who predicts the future. The pace of change in our world is mind-boggling. I recently sat with my 86-year old father at his home in the West of Scotland and watched his reaction to being able to video-conference with his grandchildren in London from my smart phone. “Your grandfather would have been fascinated by this” he told me.

My youngest daughter is 11 years of age. She doesn’t remember a time when you couldn’t find all the answers by simply pulling up a search engine. The family debates I remember as a child about “What else has that actor been in”, or “What’s that song” are long gone.

With all this information at our fingertips, is there a project risk out there that we don’t already know about? Surely the databases full of typical project risks and papers on why projects fail are more than enough to help any of us wade through the mire of potential difficulties and deliver successful projects.

Increasingly I get requests, not for my time to help with a complex issue, but to send my checklist or my process. It’s a worrying development and one which I think is a key contributor to why many of the same old risks continue to materialise. Mr Rumsfeld’s “known knowns” really should not be the cause of project failure in our data rich society, but will we learn to stop repeating some of the same basic problems that lead to project failure time after time?

We will all have most of the data we need in the future. However we may still struggle to have the time we need to apply the data effectively and use it wisely. Project risk as a discipline may continue to reinvent itself and I think it will be central to successful projects. And those charged with delivering projects will continue to seek assurance that their risks are under control.
2002-2004: SOMETHING NEW, SOMETHING OLD
Jeremy Harrison

Looking back

What was project risk management like back in 2002? Numbers, numbers everywhere ... well not quite.

I took over the chair of the APM Risk SIG after having been secretary while Eric Northcote was chairman. Eric and I had worked as a partnership and I carried on the direction that we had set out. The most significant of our achievements during my time as chair was to complete the rewrite of the APM Project Risk Analysis & Management (PRAM) Guide. This had taken some time to get off the ground, and the second edition was published in 2004 with an appropriate launch event, becoming a bestseller for the APM. It was pleasing to have been chair when this step forward was achieved, the success was very much due to the leadership of Paul Close as project manager, the enthusiasm of the writing team, and the many others who provided reviews and input.

Back to Eden

Project risk management during that period seemed to focus on the numbers, creating models and quantifying risks. Although we did arrange some Risk SIG events during my tenure that had a wider scope. The most significant of these for me was a seminar held at Abbey Wood Bristol addressing risk management on the Eden Project. I also learned from arranging this seminar that it is necessary to take opportunities when they occur – which I failed to do in this instance.

Ever since visiting the Eden Project in December 2001, not long after it first opened, I had been captivated by what it represented and was keen to better understand the story behind it. So I asked Carol Bell, Senior Project Manager on the Eden Project, to help arrange a seminar for the Risk SIG. We were able to invite leading participants from the build to present at the seminar. Eden tells the story of the importance of plants and how dependent we are on them for life. People had to work together to deliver a diverse, unique and complex project. This included the big earth-moving team (a joint venture between Robert McAlpine and Sir Alfred McAlpine) who had to deal with the wettest Cornish spring for many years and Peter Thoday (head of horticulture at Eden). Peter kept us spellbound telling the story of how the team turned a sterile deep hole in the ground into an oasis of green. One of the risks was the possibility of disease being brought into the site on plants. My missed opportunity was not grabbing the chance to engage Tim Smit, the inspirational founder, in conversation when he was all on his own at a book signing in the Eden Project shop – I had wanted to invite him to speak at our seminar. (I did later manage to invite him to the give the 2007 IRM annual lecture ... but that's another story.)

This Eden Project seminar summed up two personal shifts in risk thinking for me. I had started my risk career in safety, being particularly focused on numbers and risk exposures. Now the focus has shifted; the importance of understanding the vision, goals and objectives and identify the risks to them. There was also a second shift of emphasis that occurred around the same time, to include both opportunities and threats as part of the definition of risk. David Hillson’s presentations at Risk SIG meetings had caught my attention on this topic. It was leading edge at the time and its power and impact on risk thinking and practice is still being explored and embraced. Significant strides have been made in this direction and the ISO and BS standards have it at their centre.
From Eden to Enterprise

My early experience of project risk management at this time existed in isolation from any wider context for risk management. Enterprise risk management existed, but project risk management was seen as something distinct and different; they rarely if ever met. This has of course changed in recent years, with a much more integrated approach to managing risk across all levels.

However there were a few areas coming together even then, illustrated by the content of emerging risk management standards. The Australian/New Zealand risk management standard (AS/NZS 4360:2004 “Risk management”) provided an overarching view of risk that included all levels, not just projects, and this document ultimately became the starting point of the recently-published international standard ISO 31000:2009 “Risk management – Principles and guidelines”. Closer to home there was BS 6079:2000 Part 3, which was entitled “Guide to the management of business-related project risk”, and this provided the clearest link demonstrating how projects can put business at risk and equally the business can put its projects at risk.

To the plateau and beyond

Since handing over the Risk SIG chair to Peter Campbell in 2004, I have headed up project risk and value management within Network Rail and built a strong reputation for excellence and delivery through our team of risk and value management specialists. I have taken the learning and personal ideas from my involvement with the Risk SIG into the direction we have gone, and much of our risk management thinking has been based on BS 6079:2000 Part 3 and the APM PRAM Guide. For example we focus clearly on the concept that risk includes both opportunities and threats, and we use the risk meta-language set out in the PRAM Guide as a structure for our risk descriptions.

Despite the advances, I have also seen the effectiveness of risk management set out in our processes reach a plateau. This has challenged me to review where we should go next with risk management. We have benchmarked our processes against other successful organisations and we come up well. There is always room to improve, but our improvements tend to be ‘tweaks’ rather than any substantial or fundamental overhaul of our risk approach. Much of our effort is in ongoing risk education and competence development, as well as maintaining risk capability across the business. We are always going to need these types of activity. However I believe that there is scope for further significant improvement in our approach to managing risk, and if I did not believe this I would have moved on.

So what is the next step change that we need to make in risk management? The biggest untapped area of capability and potential in our businesses is human behaviour and tacit knowledge. So often when things go wrong, I hear people say “I knew that, we got that wrong last year on project X.” How can we avoid this tendency to repeat our mistakes and fail to learn? The Spanish satirist Jorge Santayana, wrote in 1905, “Those who cannot remember the past are condemned to repeat it.”

To deliver this step change we need to change behaviours. One significant step on the way to achieving this goal will be through providing simple tools and techniques to understand and manage human behaviour when faced with risk. This should allow us to tap into the tacit knowledge of our people, supporting more effective knowledge management and encouraging creativity. At Network Rail we have started to explore this, and it has already shown major returns in our ability to manage significant risks. We are also using our risk process and tools to track the expected value of opportunities; this benefits our projects and gives risk management a good name.

Where will project risk management go next? To some degree we are trying to predict an inherently uncertain future with confidence, and as much as we might try to put a ‘nice’ box around it, predicting the future is a ‘wicked’ problem with many drivers. Our success in managing risk in the
future will be based on the ability to invert people’s thinking, as well as continuing to deliver well what we do now. This will be achieved through implementing a managed change to behaviours in order to effectively tap into unused resources of knowledge and creativity. The great thing about humans is our creativity and ability to solve problems abstractly, often taking a number of apparently illogical steps to get to a new future.

Of course we can’t forget the numbers, which were a major emphasis in project risk management ten years ago. There will always continue to be a demand for numbers as they are necessary to plan. However it is critical for people to understand ranges better. Another step forward will be the ability to model the effect of ranges and confidence limits, allowing us to take more informed decisions rather than forcing a single figure that is usually not achieved. Achieving buy-in to ranges will also help to reduce behaviours where achieving the ‘target’ is more important than getting the ‘right’ result. Discussion to determine ranges also leads to good understanding and tests the soundness of the assumptions being made, which is a valuable spin off.

So looking forward to the future of project risk management, I agree with Winston Churchill in his famous 1942 Mansion House speech, when he said: “Now this is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning.”
The dark days

This chapter title describes fairly well my experience of risk management and its development and growth over the 6-year period when I was Chairman of the APM Risk SIG. During my time as Chairman, I've seen significant developments in risk tools and techniques, the introduction of a risk standard (BS 31100:2008), improvements in training (APM Risk Level 2 exam), more co-operation between professional bodies (IRM, RICS, Engineering Council, NEC, ICE, etc.) and a generally wider acceptance and understanding of the benefits to be realised from embedding risk management not just within projects but at all levels of business enterprise.

I took over from Jeremy Harrison in October 2004, and handed over to Bryan Barrow in May 2011. In just over 6 years, I saw the then SIG membership of 350 increase to the current level of 2688, which is one indicator supporting my view that the profile of risk management has grown, and continues to grow, tremendously. Risk management is now a mainstream activity and not simply a process buried deeply in project management; indeed, it is now adopted beyond projects and extends to programmes, strategic and portfolio levels. This chapter reflects my view of the developments in risk management and how it, as a discipline, has progressed. I’m not saying that the APM Risk SIG itself drove all progress, although I do believe the SIG has played a significant part in developing current thinking, but that this development may well have been slower to mature without us. My view is informed through extensive contact with project professionals, the work I’ve undertaken with professional bodies and my involvement in the production of risk guides and standards.

Prior to becoming Chairman of the Risk SIG in October 2004, I’d worked in project management, health & safety and risk management for over 20 years. Working in telecommunications, IT, cryptography and defence I’d seen many ways of capturing and managing risk, ranging from the simplistic listing of problems to be overcome through to a more sophisticated use of spreadsheets to analyse and manage risk impacts. Although there are many text books and guides available to explain and describe ‘best practice’ methods of managing risk, including the APM Project Risk Analysis and Management (PRAM) Guide, in my experience risk management was talked about more than it was actually implemented. Working with clients, I could always find some form of risk register and supporting documents such as a risk management plan or risk strategy, but they were more often than not out-of-date or to be found in a drawer somewhere gathering dust. This is probably something of a generalisation, but it does reflect the level of risk management maturity I recall from those earlier days. I can also remember being given risk registers in Word format that lacked any evaluation of probability and impact. These were indeed, for me, the dark days. At that time attending Risk SIG events gave me chance to re-charge the batteries: I welcomed being able to speak with people who understood the difference between risks and issues, knew that risk registers should not be treated as ‘black-holes’, and were familiar with the concept that if you didn’t manage risk it will manage you: I always considered these events as a safe haven!

You may think this extreme; however, it is based on fact: my day-to-day work would include endlessly explaining that; yes, I did need an accurate description of the risk; yes, it is important to evaluate an impact; yes, you do need to do something about mitigation, not just say ‘it’s on my to-do list’……it goes on. On one memorable occasion a project manager criticised the Excel-based risk register I’d developed because “it has too much information”. Was this rebuke justified by my use of superfluous or inappropriate information? No, simply that “there’s too much information to fit on a PowerPoint slide”! Many project managers could not understand why a specialist area of ‘risk
management’ was needed: surely any experienced project manager can foresee potential problems and will know instinctively what to do about them? Oh really! Others, perhaps more dangerously, appeared to openly support and promote risk management whilst totally ignoring recommendations and alternative strategies. I can remember many hours trying to explain the difference between risks (threats), issues and opportunities, as well as explaining pre- and post-mitigation: sad to say, I still do, just less often now!

This was a time when risk was thought of as solely negative; something to be avoided and certainly not to be confronted. In general usage this is still the case: you regularly hear phrases in the media such as ‘there is a risk of bad weather’, ‘the risk of a pandemic’, ‘the risk to the economy’ etc. The APM PRAM Guide had described risk as having elements of both threat and opportunity, which gave risk management a welcome and more positive feel. This view was supported by the OGC “Management of Risk: Guidance for Practitioners” (M_o_R), and it opened a door to a more positive style of risk management. Some never did grasp this fully and instead used the composite term “risk and opportunity” which, in my opinion, simply anchored risk yet again with solely negative connotations. Although it is less true today, many struggled with the concept of ‘upside risk’, the opportunity or the benefit to be gained by applying a process that controlled the negative to emphasise the positive. This seems strange, as the insurance industry have been making a very good living doing just that for many years.

Many considered that risk could be managed simply by ‘throwing money at the problem’, by holding a financial contingency to account for the eventuality of ‘things going wrong’. This contingency was calculated usually in a crude manner, typically as some percentage of a project budget. It was usual for a business case to assign between 8% and 15% of the total project budget as risk contingency; however challenges to justify this amount were usually met with blank looks and silence. This demonstrates the focus being placed on subjective assessments: the worrying thing was that some considered this to be risk management.

I don’t want to give the impression that good practice did not exist; it’s just that I found more of the bad. Also I can’t say that quality software was not available to undertake quantitative risk analysis (good old Monte Carlo), or to ignore that some sectors had been successfully undertaking such analysis for many years but that, in general, it was not being used widely in projects other than for cost analysis. The concept of schedule risk analysis began to be introduced, starting with establishing ranges for project activity durations, rather than using a single deterministic value, and providing three-point estimating (minimum, expected and maximum durations) which at least allowed some simple project evaluation review technique (PERT) analysis to be undertaken. The next move to link risk to activities and be able to provide ‘confidence’ values for achieving milestones was something I grasped wholeheartedly and ran with; however, as is still the case today, this level of analysis was not routinely undertaken or its value understood. Things though were beginning to change.

The Light is Turned On

The Risk SIG has played no small part in changing perceptions of risk management. On reflection, I suppose the ‘good practice’, knowledge and ability resided in such bodies as the Risk SIG who continued the struggle to gain wider recognition and understanding of the potential benefits we could deliver. The problem for me was that many outside of this group were not really listening to this message. Through regular Risk SIG events, including four conferences per year, and the publication of guides like the APM PRAM Guide, the message was being pressed home that good things do come from implementing risk management throughout the project lifecycle. Unfortunately; I was still working with a number of project managers who couldn’t see the need for risk management and had never heard of the PRAM Guide; however, they were becoming fewer.

There was a shift; government initiatives, the Latham Report, Sarbanes Oxley, the Treasury Green Book all placed emphasis on the governance and application of risk management. Risk was now in the spotlight: management reserve was taking over from simple contingency, more quantitative risk
analysis was required to support project decisions, terms such as ‘risk-based decision-making’ were being used and companies asked their suppliers for evidence of risk management effectiveness before a contract was awarded.

Quantitative assessments were called for, something at one time I talked about more than implemented, and these became the norm with improved risk software to enable this. It would be unrealistic to claim that all projects now undertake rigorous qualitative and quantitative risk analysis or to suggest that nobody undertook this type of assessment prior to 2004, but my point is that, generally, we have moved from a limited knowledge of risk to a position where risk management is now a household name. I now have far fewer conversations to explain what risk management is: now they are more likely to be about implementing enterprise processes. The light is definitely on.

**The future is bright?**

Enterprise risk management, strategic risk management, project, programme and portfolio risk management are not new concepts. Enterprise and strategic risk management have been around for many years; however, the number of companies taking on these concepts for the first time is increasing dramatically. As many APM members will know, project, programme and portfolio (P³) methodologies have been embraced by APM and we have two APM SIGs that support these areas. Indeed, the sixth edition of the APM Body of Knowledge (2012) reflects this development with an expanded risk management section to include P³ elements. Developing from project risk management into programme risk management seems an easy move to make; however, portfolio risk management is somewhat different. There is an argument to say that this is outside the scope of what is, after all, the Association for Project Management. I do not support this opinion; however, having in the last year been working in a more finance focused organisation I find there are at least two definitions of ‘portfolio’ in general use. From a project perspective I define ‘portfolio’ as the next level up from programmes: the level at which an organisation or board would assess risk to business strategies. For this interpretation, the risk management principles applied at project level are equally valid; however there is another definition of portfolio risk management that is not risk management ‘as I know it’!

In project or programme risk management, once a risk has been identified (taking this to be a threat and one that is to be managed) an initial assessment of the risk exposure would be made, mitigation action would be planned and a level of exposure set which is acceptable to the organisation (the target exposure) would be agreed. To report on progress a periodic re-assessment of the current exposure would be made to show progress toward the ‘target’ goal. Standard approach I hear you say: but is it? An interpretation of portfolio risk management can take an opposite view, stating that once a risk has been identified the exposure can never be reduced it can only be ‘controlled’. If this ‘control’ is removed the full impact of the initial risk exposure will be felt. An example of this could be the damming of a lake: remove the dam and flooding is inevitable. Traditional project risk management would identify actions to prevent damage or removal of the dam, and so reduced the likelihood or exposure to this event. An alternative view is that you can never prevent the dam being removed but you can only implement a control to stop such action. Is this not just saying the same thing but in a different way? I don’t believe it is, since implicit in the latter definition is that risk can never be removed, it goes on forever and management is focused on maintaining the ‘control’ and not reducing exposure.

So; for example, I can work within the concept of implementing mitigation that will deliver continuing future reduction in exposure, whilst the alternate view can only monitor today’s value in which an increase in exposure is acceptable. There is a warning here that whilst I have championed closer relationships between professional bodies there is always the potential, if we do not take care, for major error in implementation if the language we use is not well understood by all.

Risk management is finding its way into other areas of project control; for example, the links with EVM, value management and contracting. I have been working with the Engineering Council, NEC
and ICE, all of which have differing approaches to the management of risk, but they all recognise that the methodology has wider application and benefit. Notwithstanding the need for caution, there is an important development to come out of this closer relationship between professions: the breaking down of the ‘silico’ mentality. In the past there was a view that a risk manager did not manage the risk but merely managed the risk process. This inferred that you needed knowledge of how the process was used in a particular specialisation. Therefore a risk practitioner in construction knew little of the world of telecommunications or IT. If you specialised in banking or finance you would not have sufficient experience to work in transportation. This may have had some validity in the past, but I think it is less relevant today. The opening of relationships between professional bodies exposes this myth for what it is: inaccurate and wrong. If you understand the principles of managing risk you can then apply this knowledge across many areas of business. Indeed, due to projects and programmes becoming more diverse and the relationship between client and supplier becoming increasingly ‘partner’ focused, risk practitioners are now required to deliver more than the process, they now need knowledge and experience of a wide range of business practices.

As future projects will contain elements of outsourcing and partnering, the risk manager will be expected to have knowledge of the impact of such activities including what new risks they bring and how best to mitigate them. Outsourced projects bring new challenges particularly when the partner is many thousands of miles away from UK shores with the communication problems due to time zone, language and cultural differences this can bring. Companies and organisations undertaking new delivery strategies require support from their risk managers which will require the effective risk manager to understand more than simply how to implement the risk management process. The traditional project risk methodology is now being used to combat global problems such as cyber-attack, which has become a current ‘hot topic’. Companies now need to implement strategies to reduce their susceptibility to cyber-attack and denial of service risk. The risk manager’s experience and competencies can play an invaluable part in this work. From a project perspective, delivering an electronic data transfer solution which could be vulnerable to such attacks is a new source of risk. Risk practitioners will have the opportunity to provide more than a process to identify these risks, they should be proactively offering solutions for impact reduction. With communications being such an intricate part of our daily lives, cyber risk and how to control it will continue to take more of the risk manager’s time and effort. The importance of this work can be seen in the Government’s position when, even with the current economic situation, they are putting an additional £650 million into developing UK’s cyber defences.

Risk management practitioners are no longer limited to working in what could be described as the more traditional project areas of delivery. I now have to answer questions on a wider range of topics than when I first became Risk SIG Chairman in 2004. Questions and calls for guidance on subjects including strategy, finance, political and social, technical, security and intellectual property rights risk are almost daily occurrences. I do not believe I’m the only one in this situation, but I can see this becoming the norm for the future risk practitioner. Although it may in some cases still be true, in the past a successful risk management practitioner was one who knew how to facilitate workshops, could maintain a risk register, undertake some analysis and provide general guidance on risk strategies. I do not see the future risk practitioner losing sight of such abilities, but these skills will be more of a foundation with a whole host of additional competencies and abilities being required. For me the future is in delivering more than the risk management process, it is in providing knowledge and support for business and enterprise situations.

In the period 2004-2011, I’ve seen a lot come to fruition but I see even more to be achieved on the horizon. Long may this development continue and long may the APM Risk SIG continue to be leaders in this future.
2011-2012: CURRENT CHALLENGES
Bryan Barrow

My time as Risk SIG Chair coincided with probably the biggest single wake-up call on risk, not just for people managing risk in projects, but for society as a whole. It might sound melodramatic to speak of the biggest upheaval in almost a century, but I’m sure that a century from now people will look back at the period that we’re living through in the same light and with the same perspective as we view the Depression of the 1930s. I don’t think it will even take that long. It took barely six months for the then former Chancellor of the Exchequer Alistair Darling’s comments in August 2010 about the unfolding economic crisis as “arguably the worst they have been in 60 years” (1) to go from being vilified to devastatingly accurate.

I mention this only because in my talks on risk management I often refer to parallels between the management (or mismanagement) of risk in the financial sector and the management (or mismanagement) of project risk. Today is no different.

It is now four years on from the financial meltdown caused by a catastrophic failure of risk management in the financial services sector. The resulting recession has caused Eurozone countries in particular to slash spending savagely in order to reduce their debts and restore growth. We are all still paying the price in terms of reduced economic activity, higher unemployment, reduced return on savings and investments and higher prices.

The causes of the meltdown are many, but two things stand out:

1. Over reliance on risk management models, systems and tools - which were used by many but understood by a very few - set the stage for the meltdown;
2. Human behaviour, driven by financial incentives and rewards, was in large part responsible for the recklessness that triggered it.

So how has the failure of financial risk management affected the way people perceive project risk management? Did it result in a declaration that risk management doesn’t work and a decision to ditch the disciplines of the last few decades? Did it result in the determination that ”lessons must be learnt”, that more must be done to manage risk in projects? Or did nothing significant happen at all?

Thankfully, the first of these three scenarios did not come to pass. Unfortunately neither did the second.

The damage caused by the financial sector should have led to an increased appreciation of the benefits of proactively managing risk. However I don’t believe that it has and I know that I’m not alone in that opinion. If the view in 2004 was that risk management was ”seldom effectively applied” (2), the view almost a decade later doesn’t appear to be that much different.

It is true that there is now an increased focus on risk management in the organisation as an enabler of long term growth and profitability (3). Investment in risk management is rising and is expected to rise even higher. However it is still the case that, within organisations of all kinds, the tremendous value to be realised through the use of risk management in projects is lost. This loss is not just limited to the budget of those projects which fail to deliver. It is also:

- The lost profits or savings that these projects were intended to deliver;
- The loss of market share caused by the non-delivery of new products, services or change in organisational capability;
- The reputational damage that can result from the failure to take appropriate action.
So what can we do about this? My personal view is that we need to focus our efforts on three things:

1. Increased focus on people and behaviours, rather than analytical tools;
2. The need for project risks to be incorporated into enterprise risk management;
3. The development of a risk culture across the entire organisation, so that risk is no longer seen as the preserve of a select few within the organisation, but an enabling capability that provides value to everyone in it.

1. Increased focus on people and behaviours, rather than analytical tools

If there is one key lesson that the project management community should learn from the financial services sector it is that an over-reliance on risk systems and tools can blind them to the true level of risk in projects. In financial services the development of mathematical models reached the point where even experienced practitioners could hardly understand them. These systems became black boxes, accepting information and pumping out recommendations which people came to rely on more and more without really understanding the underlying logic. As these systems became ever more complex they side-lined all but a very few; risk management came to be seen as something ‘too complex’ for many to understand.

The danger for the project management community, and for the wider organisation, is that it will go down the same road by attempting to put tools in place for the management of risk that side-line the people in the organisation who, like those in the financial community, will become divorced from the decision making process because it is too complex for most to understand. If this happens, then eventually we will follow the recommendations of these risk management models blindly. We know that human beings will follow instructions given to them by those in authority, even when those instructions may result in harm. We need to stop this from happening. We need to put people back at the heart of the risk process and develop their willingness to participate in and manage risks. We need to avoid a future scenario where people look back after a serious project failure and say “we didn’t see it coming.” The truth is that we almost always can, but we just choose not to and as a result spend too little time involved in proactive project management and too much time getting involved only after a significant setback.

If we are to change that, then we need to look at how people and groups make decisions. This includes:

- How to prevent people from making incorrect decisions when under pressure. The best time to make a decision is when heads are cool and the pressure is not yet on. That means looking ahead at potential problems and forming plans before they are needed. There is still too much reactive, last minute and last ditch decision making. Sometimes these decisions turn out to be correct, but it would be better not to have to make decisions in circumstances where a poor decision can tip an already precarious project over the edge;

- The role of incentives and rewards. Whether we look at the financial services sector or project management as a profession, it seems clear that there are few penalties for failure and – in the financial services sector in particular – incentives in one part of the organisation can reward behaviours that cause damage to the remainder. One of the perennial dangers of rewarding individuals for good performance in a project context is not just that it is less effective at raising performance levels than team incentives, but it can actually militate against good teamwork altogether;

- Creating a stronger risk management culture, which I will come on to later.
2. The need for project risks to be incorporated into enterprise risk management

The legacy of the current recession is that, for the foreseeable future, cost reduction and the need to manage projects within tight budgetary constraints will be vital. No less vital, but harder to navigate, is the change to the risk landscape. There are a wide range of emerging risks that must be managed but which organisations are still only now waking up to. These include:

- political instability and volatility;
- economic uncertainty;
- social unrest and demographic change;
- the growth of cybercrime and the impact of technology on the organisation.

Tackling these changes will require organisations to have a better appreciation of all of the risk factors that may affect their performance and to be quicker to respond to these threats.

Although it is increasingly common for organisations to have a Chief Risk Officer with overall responsibility for the management of risk, there is still a tendency for project risk to be managed separately from other sources of risk within the organisation. As a result poor risk management in projects can affect the wider organisation. In many cases intervention comes only once deadlines have already been missed.

The key corporate driver for the next decade will be improving profitability, but many companies are left exposed to significant potential losses because of poor project risk management. In extreme cases we’ve seen projects wreak havoc on the wider enterprise which then has a difficult choice to make: invest further in order to rescue the project, or suffer further loss through its cancellation. It is ironic that while some of the main reasons for project failure are unrealistic expectations and poor alignment with the business, it is precisely the lack of alignment with the business, in terms of visibility, responsibility and management of risk, that allows these failures to happen.

If organisations are to close the gap between their expectations of projects and the reality then risk in projects must be brought into the fold and considered alongside other sources of risk within the enterprise. Not only would this provide the organisation with a better view of the real threats facing them from troubled projects, removing the blind spot that exists now, this would also leverage the skills of risk practitioners within the risk management function and draw on risk management tools that are used elsewhere but not applied to the management of risk in projects.

The good news is that organisations are seeking to improve their ability to visualise and analyse risks at an enterprise level. Many have prioritised their investment in risk management tools, including analytical tools. By concentrating risk expertise, data and analytical tools in one central function they will be better able to plan and respond to threats that might otherwise overwhelm them.

3. The development of a risk culture across the entire organisation

Increased focus on people and behaviours and bringing project risk management into the corporate risk function will offer significant benefits. The development of a stronger risk culture across the whole organisation offers greater benefits still. Such a risk culture would mean tackling a number of current challenges.

The first of these is the need to change the prevailing view that risk is all about preventing loss and instead include the need to maximise opportunities (and thereby improve profitability). Much of current risk management practice focuses on the limiting of loss, or the preventing of negative threats to success. Organisations that fail to spot and capitalise on the opportunities that exist will
be outmanoeuvred by those that do. In a more buoyant economy companies might survive but they cannot expect to do so in tougher times.

The next is the need to make everyone responsible for managing risks and for everyone to take accountability for doing so, so that the management of risk becomes an everyday, whole-company approach. By widening the responsibility from a select few to the many, organisations encourage everyone to participate in the risk process both for preventing mistakes and for spotting opportunities to move the company forward. This is a long-term cultural shift which includes encouraging more open communication, setting standards and values, encouraging learning and self-development.

If people are to be empowered to manage risks then the next challenge is to train and educate people within the organisation so that they have the tools and the skills to manage risks that they face. This includes general risk management awareness training for everyone, with more specialised risk and opportunity management training for those who deal with specific types of risk, whether financial, security, project, safety, or other.

Another challenge to overcome is the need to share risk information across the entire enterprise, so that information on threats is not contained within organisational silos or concentrated in the hands of a few. This has to be simple to understand and to interpret, up to date to prevent people acting on old information and available in a variety of levels of detail. For the project management function that means exposing information on risks up to the enterprise level. It also means having access to enterprise information so that decisions can be made that reflect the organisation’s priorities and needs, not just those of the project. For people outside the project management function this means being aware of the progress of projects and initiatives and the impact that they can have on projects in their day-to-day work.

A key challenge is the need for senior management to provide real resources to enable people and teams to deal with risks, as well as for management to deal proactively with risks that are presented to them for action, instead of leaving project managers to deal with the consequences of poorly performing projects (8). This is not just a case of putting up the money; senior managers must demonstrate the values that they want the organisation to adopt and the goals that they want the organisation to achieve (9). If people in the organisation feel that their senior managers don’t really back up their words with actions then they will not change. For project teams specifically this means seeing steering boards actually taking action when presented with risk information.

The next challenge is for senior management again. This time it is to encourage learning from the past, instead of avoiding the past for fear of blame. Although I have said earlier that there is often little sanction for failure I specifically mean this in the sense that there should be rewards for success and lack of rewards for failure. Looking at rewards for success, organisations should look to the elimination of mistakes and the perfection of processes, skills and tools as a reward in itself. This success is eventually evidenced as a better skilled workforce, better products, services and / or processes, being better able to adapt to a changing environment or to changing markets and, ultimately, being more profitable.

For the project management function that means ensuring that people with responsibility for managing risks (and that means everyone) understands their role, is trained and educated in dealing with both risks and opportunities, participates in the risk management process, communicates openly about risks and works with team members and others across the enterprise to resolve them, takes responsibility for failure and for learning from failure (including personal development and learning) and supports others while they develop their skills.

The final challenge is for those who don’t want to adapt. Although it may be true that those who fail to learn from history are destined to repeat it, that does not mean that they should be allowed to.
Those who are reluctant to change will eventually be seen by the rest of the organisation as a threat to be removed if it is to survive these current harsh times into the future.

Final words

My time as Chair of the Risk SIG has been short compared to some at just one year, but I know as I hand over to the next Chair that the SIG can look forward to a world where it has increasing influence in decision-making through the work that its members do in the workplace and with the thought leadership that it provides through project risk management talks and events, standards, guides and literature. That influence will, inevitably, lead to a stronger risk culture and greater success for both its members and the organisations that they work for.

References


CONTRIBUTORS

Chris Chapman was the founding chairman of the APM Risk SIG in 1986 and he remained in the chair until 1992. Chris is a consultant and academic focused on risk, opportunity and uncertainty management. He advises organisations how to design, implement and develop processes which increase effectiveness and efficiency. Chris has extensive experience as a consultant with a wide range of organisations, mainly in the UK, Canada and the USA, but also in other European and South American countries. He has grounded academic research on his consulting in an academic career which has included being the director of a management school. Appointed Professor of Management Science at Southampton in 1985, Emeritus Professor in 2004, he is now on a part-time university contract. Chris became a Senior Associate of The Nichols Group in 2004. He is the author/co-author of widely acknowledged books and papers, and has contributed to several guides.

Peter Simon chaired the APM Risk SIG from 1993-1995. Peter has over 30 years of experience as a project management consultant and practitioner across all industries and business sectors and for the last nine years he has been a Managing Partner and latterly Director of Lucidus Consulting. In his early career he worked for a variety of organisations across the Oil and Gas, Utilities and Transportation sectors in project services. Most recently Peter has been engaged as a risk specialist on a major government change programme and on the development of project management competence for an international pharmaceutical company. Peter was an elected member of APM’s Council from 1998-2001 and was a Trustee and Board Member from 2008-2009. He was Project Manager and Managing Editor of the PRAM Guide published in October 1997 and Project Manager of the APM’s Bok 5th Edition. Peter is co-author of two books: ‘Starting Out in Project Management – Study Guide for the APM Introductory Certificate in Project Management’ and ‘Practical Project Risk Management: the ATOM Methodology’.

Ken Newland was APM Risk SIG chairman between 1996 and 1997. Ken’s background is mainly in Defence, spending 23 years at Ferranti in electronic engineering, project management, quality assurance and business development. As MD of Quintec Associates for nine years he helped grow a successful system engineering, risk, and bid support consultancy, joining Thales when the consultancy was acquired. Since then he has provided bid, prime contracting and risk management consultancy and training in many parts of the world. Ken is a Fellow of the APM. He co-edited the first edition of the APM PRAM Guide and contributed to the second edition. He was also one of the authors of the “Interfacing Risk and EVM” Guide. He is a board member of the Association of Proposal Management Professionals (APMP UK), is a Chartered Engineer, a Parish Councillor, and chairman of the local Carnival Committee. In 2009 Ken created an independent training and consultancy organisation to enable him to share with others the experience he has gained.

David Hillson was APM Risk SIG Secretary from 1994-1997 and he went on to chair the SIG from 1998-2000. Known globally as The Risk Doctor, David is recognised internationally as a leading thinker and expert practitioner in risk management, and he consults, writes and speaks widely on the topic. David has worked in over 40 countries and specialises in both strategic and tactical risk, with a particular interest in opportunity management and risk psychology. David’s contributions to the risk discipline over many years have been recognised by a range of awards, including “Risk Personality of the Year” in 2010-11. He was honoured as an Honorary Fellow by the Association for Project Management (APM) and as a Fellow by the Project Management Institute (PMI®) for his ground-breaking work in project risk management. David Hillson is an active Fellow of the Institute of Risk Management (IRM), and he was elected a Fellow of the Royal Society of Arts (RSA) to contribute to its Risk Commission. He is also a Chartered Fellow with the Chartered Management Institute (CMI) and a member of the Institute of Directors (IOD).
Philip Rawlings was the first APM Risk SIG chairman in the new millennium, holding the post from 2000-2002. Graduating with a BSc in Chemical Engineering in 1969, Philip worked in petroleum refineries and construction – including a long spell in Saudi Arabia – before joining Euro Log in 1977, shortly after its foundation. He built up a career in project risk management, consulting to many clients in diverse sectors, such as UK defence, pharmaceuticals, railways, oil & gas, energy, and engine development, working both for owners and contractors. He was appointed Technical Director of Euro Log in 1987, with special responsibility for maintaining Euro Log’s eminence in risk management and for developing and sharing Euro Log’s expertise in creating risk models to represent the impacts of risks and uncertainties on client endeavours. He was involved with specifying the capabilities of Pertmaster (now Primavera Risk Analysis), and developing risk add-ons to Pertmaster and other risk tools. He was an early member of the APM Risk SIG, contributing to the first edition of the PRAM Guide.

Eric Northcote chaired the APM Risk SIG between 2002 and 2003. Eric has almost 20 years’ experience of major programme delivery as a programme adviser and risk management consultant to some of the of the largest projects and programmes undertaken in Europe. Eric began his career as a project risk specialist with YARD Ltd in Glasgow, where he was part of the team who developed RiskNet, one of the first Monte Carlo cost and schedule risk software tools. RiskNet was used on a number of the major defence procurements in the 1990s. During this period Eric provided quantitative and qualitative risk analysis to major defence programmes and also worked within the energy and manufacturing sectors. At Deloitte, Eric established a project risk team to provide a centre of excellence across project and programme risk and assurance, providing training and mentoring of staff and developing the skills to elicit risk knowledge and information to help identify, assess, manage and control risk. Eric now leads KPMG’s Risk and Compliance team’s programme assurance and risk function, where he works with blue chip companies to help them improve their project and programme discipline and risk management across the enterprise.

Jeremy Harrison was APM Risk SIG Chairman from 2003-2004. Jeremy is Head of Project Risk & Value Management at Network Rail, setting the standards and providing support for risk and value management for projects (annual expenditure of over £4bn). He has just been awarded Highly Commended in the European Risk Manager of the Year, Strategic Risk Awards 2012. His team were Highly Commended Risk Team of the Year at the Risk Professional Awards 2010. He has worked in risk management for twenty years, developing safety risk management policy and Safety Cases in the early to mid-1990s at the British Railways Board and Railtrack Safety & Standards Directorate (now RSSB), to projects, business and corporate. He is a Fellow of the Institute of Risk Management, a chartered member of Institute of Occupational Safety and Health and chair of the BSI Risk Management technical committee RM/1 which published BS 31100:2011. He has also represented the UK as Principal Expert for Project Risk Management on international standards.

Peter Campbell has been the longest-serving chairman of the APM Risk SIG. He was chairman from 2004-2011, and has recently resumed this role again in 2012. Peter is an active supporter of risk management in addition to his role with the Risk SIG, being a British Standards Institution Risk Management committee member and providing support to professional bodies and universities. Peter has been a contributing author for risk guides and standards such as BS31100, Integrating Risk and Earned Value Management, the Project Risk Analysis & Management Guide, Prioritising Project Risks, the APM Body of Knowledge and the Office of Government Commerce Management of Risk guidance. Additionally Peter has written articles on the application and benefits of quantitative risk management, and he provides risk management and estimating training. As well as being a Fellow of APM, Peter is a member of various professional bodies including the Institute of Risk Management, the British Computer Society, the Institute of Engineering and Technology, and the Society for Risk Analysis.
Bryan Barrow is the immediate past chair of the APM Risk SIG (2011-2012). Bryan is a freelance project management consultant working with companies in the information and communications technology sector who are struggling to deliver software-rich projects on time. With his help they are able to deliver faster so that they go on to realise their investment in projects. Bryan is a Chartered IT Practitioner, a member of the British Computing Society (BCS), a member of the Association for Project Management (APM), and a member of the Professional Speakers Association (PSA).
About us

The Association for Project Management is committed to developing and promoting project and programme management through its Five Dimensions of Professionalism. There are a number of ways in which you can benefit from what we do, including:

- membership,
- qualifications,
- events,
- publications,
- online services.

The association is a registered charity with around 20,000 individual and 500 corporate members making it the largest professional body of its kind in Europe. As part of its strategy to raise awareness and standards in the profession it is currently in the process of applying for a Royal Charter.

The APM Risk SIG provides a forum in which to share knowledge and ideas, develop expertise and understanding, foster ‘best practice’ and actively promote the adoption of project risk management.

The SIG holds four events per year, usually in January, April, July and October in various locations around the country. In addition we support many local APM Branch events, other APM SIGs and conferences organised by professional bodies and organisations.

The Risk SIG’s objectives are:

- To enable effective management of risk
- To provide a forum for sharing experience and knowledge
- To promote best practice in development of guides
- To establish specific qualification standards for APM qualifications
- To facilitate the training and development of risk practitioners
- To promote links with other recognised professional bodies
- To provide a forum for sharing latest tools and techniques
- To provide an opportunity to network with people from similar/different roles/positions.

Contact us

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