Can we afford to skimp on risk management?

Don't get me wrong; I'm proud to be a project manager. I'm proud to be a member of the Association for Project Management and, for that matter, of the Project Management Institute. I enjoy my work as a project management consultant. I get a buzz from attending the many conferences and workshops that produce so many new and exciting ideas. I find the whole topic of project management fascinating. I am convinced that demand for project management will increase dramatically during the next decade. In short, project management is a good place to be!

Perhaps this isn't so surprising. After all, projects have been around a long time, we cannot claim to be the oldest profession, but the first pyramids used single point responsibility, contracts and effective mobilisation of labour. And they were built about four thousand years ago (give or take a few hundred years - well within the normal accuracy of a schedule estimate). The Eighteenth Century saw the great age of railway and engineering projects that gave birth to the modern disciplines of project management.

Even the tools that we use every day have been with us for quite a while. Henry Gantt developed his eponymous chart more than a century ago, and even sophisticated network analysis has been around for more than half a century.

Yet we still get it wrong!! Report after report shows that we fail to deliver the anticipated benefits (read KPMG's report on implementing packaged software solutions, for instance) and we consistently over spend our budgets and over run our planned schedules (read the National Audit Office's reports on major defence projects).

There are some eminent members of our profession who will take exception to what I am saying. They will point out that many projects DO deliver the planned benefits, DO come in under budget and DO come on stream ahead of schedule. But it is a question of what proportion of projects succeed against plan. Since all projects contain unique elements, one would expect a distribution of project performance against plan. If we had it right, the curve of distribution would look something like Diagram 1.

In fact, analysis of projects in a broad variety of project-based companies operating in various different industries including engineering, construction, oil and gas, financial services, utilities, retail I aerospace, pharmaceuticals and manufacturing shows a pattern much more like that in Diagram 2.

The mean performance of projects against plan is much closer to 120% than to 100%, taking into account simply cost and schedule. When benefits or quality are considered in addition, then the picture worsens.

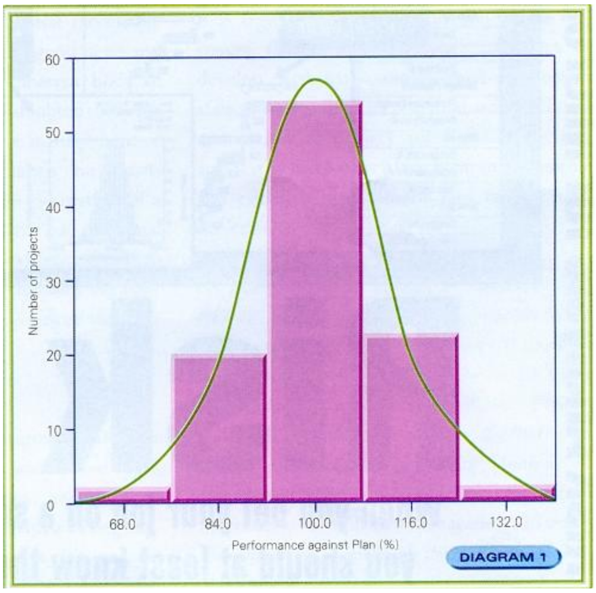
That is why I say that we have got a long way to go. I am convinced that risk management is the most important key to releasing us from our history of under-performance.

What is the evidence that risk management makes a difference?

The evidence for this claim comes from our fourteen years as project management consultants. It is born out by results obtained from the two project management benchmarking networks that we initiated and now support (known as Europe I and Europe 2).

In our benchmarking activities, we examine data at two levels. At the 'enterprise level' we examine the corporate project management practices that are mandated or recommended or simply practised, while at the level of specific projects, we examine in detail the project management practices that are applied, and the results that the project accomplishes. To start with the enterprise level. In our first round of benchmarking in 1994 we considered ten major areas of project management practice, one of which was risk management. This included all four widely accepted stages in the risk management process: identification, analysis, management and response control. Each of the 10 areas was scored for approach (i.e., what your procedures manuals say should be done) and for deployment (what actually happens on the ground). In terms of approach, risk management was the lowest scoring of all ten areas, while in deployment it was higher only than 'Measuring Project Performance.' For those of you who are sad people like me, and enjoy statistics, Diagram 3 shows how the ten areas scored.

When the questionnaire was updated and expanded to include two new areas of practice (managing the customer, and implementing process improvement), the results were very similar. There had been some improvement in the approach scores for risk management, but it was still the lowest, and its deployment still languished along with measuring project performance.



In itself, this provides no evidence to substantiate my claim. That comes from the more detailed analysis of project level data. It has been carried out twice now; once in 1996 on a sample of 25 projects, and more recently in 1998 on a larger sample of 80 projects. In the first analysis, the difference in compound performance (i.e., time/cost/quality) between projects that had effective risk management and those that didn't was 45%. Project managers were asked general questions about broad areas of practice, and evaluated 'risk management' as a whole, so the specific areas of risk management could not be distinguished.

Before the second project analysis was carried out, the whole basis of data collection had been simplified, improved, made more rigorous, and automated with user-friendly software. The theme of risk management was covered in ten very specific questions covering different aspects of the four stages in the process. This time there was sufficient data to Plot a 'line of best fit' that showed a gradient on cost/schedule performance from a mean 170% of plan for projects that rated their risk management processes as not at all adequate', to a mean of 95% of plan for those that rated them 'fully adequate '.

Of all the different areas of project management practice considered, none other had the same effect on project results as risk management! There is a snag of course. The measurement is of actual against plan.

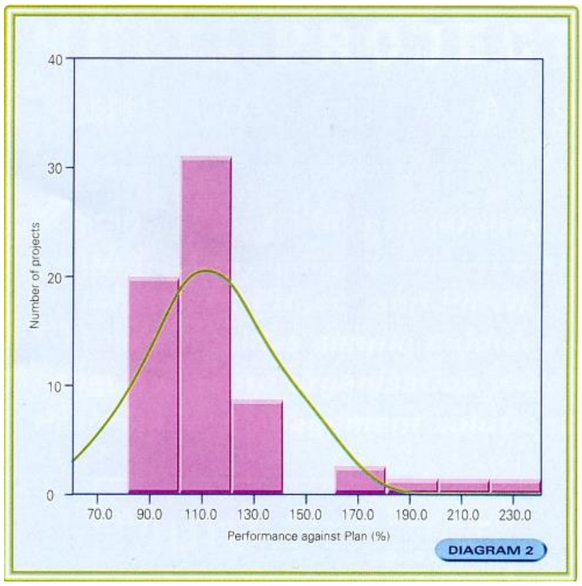
So there is no clear evidence as to whether risk management increases the planned schedule and budget, or whether it reduces the actuals. What can be asserted with a great degree of confidence is that if your project is budgeted to cost L2 million and to last 18 months (the typical figures for projects in our database), then the difference between having fully adequate risk management processes and having ones that are not at all adequate is over LI million or 9 months delay, or some combination of the two.

This is for a single project. Can any company that is serious about projects afford NOT to have excellent risk management practices? How can the level of risk management practices that we have seen in many of the country's leading project-based organisations be allowed to continue?

Why are we so bad at risk management?

To answer this question requires us to leave the (relatively) firm ground of evidence, and to speculate why it is that we are so bad at risk management. It doesn't appear to be for lack of available expertise or accepted wisdom. There is no shortage of risk management consultants (as a glance through the pages of this magazine will reveal). Risk management forms a significant element in the bodies of knowledge of both APM and PMI. BS6079 devotes a page and a half to risk management, there are many books available on the topic, and risk management software is available in many shapes and sizes. There is even a companion journal to this magazine devoted to Risk (the *International Journal of Project and Business Risk Management*).*

So where does the problem lie? I am going to suggest four areas within which we might dig to find the true causes of difficulty. Indeed, the truth may lie in all of them plus other areas to which I am currently blind. My aim in listing these is not to provide a definitive answer, but rather to provoke thought in a number of significant areas.



1. We underestimate how much the 'physics 'of projects work against us.

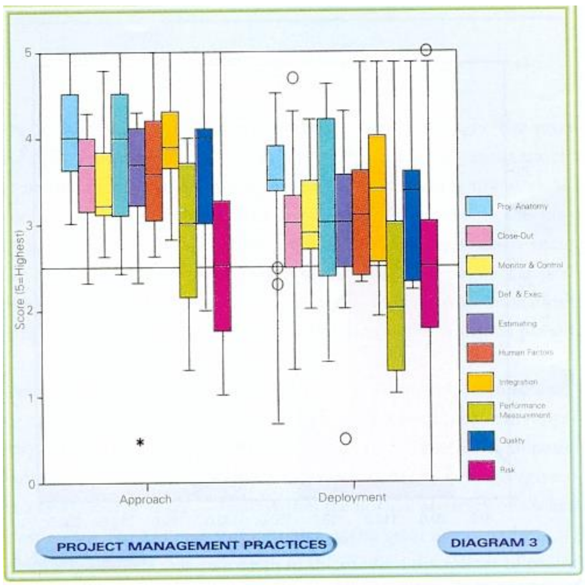
The classic 'butterfly curve' (see Diagram 4) showing that our influence over project outcomes diminishes as time goes by, while the incremental cost of making changes increases over time, is well known in some form or other to project managers. But I wonder if we truly make sufficient allowance for it?

The project manager is always labouring under the pressure of making decisions today, with inadequate information that will be better known tomorrow, by which time some ground has already been lost. Risk management, it seems to me, is a way of making an uncertain future more visible to us today, so that we can take a better quality decision in spite of not knowing precisely what the future holds.

2. Our *'worldview' prevents us from taking risk seriously.*

No two organisations, let alone any two individuals, share precisely the same 'worldview'. But the widespread absence of excellent risk management practice suggests that some elements of the prevailing worldview are lacking where risk management is concerned.

In a sense, our failure as a profession to deliver excellent project management performance has encouraged our sponsors and participating organisations (never mind the general public) to believe that 'all projects run late and exceed budget, don't they?' This in turn allows organisations with a tendency to JDI (just Do It), to harbour the belief that only by setting challenging targets will the members of project teams be sufficiently motivated to achieve a high level of performance. 'After all', runs the argument, 'it is better to achieve 90% of' a challenging target than 100% of an easy one.'



Against these deeply held management convictions the project manager is at a disadvantage. After all, for any risk there IS always a chance (however slight) that it might not happen! So no project manager can PROVE that a specific amount of' contingency cost or schedule is the right amount. This is merely a specific symptom of the general point that we human beings find it much easier and thus preferable to refer all decision back to a known past, rather than forward towards an unknown future. After all, who wants to be reminded of all the possible disasters that might lie in wait for us around the next corner?

3. We lack a solid basis of evidence

The data that I have quoted above is far from being a 'knockout argument', even though I am convinced that it is too strong to ignore. Our benchmarking networks, Europe I and Europe 2 have been gathering and analysing data from more than 25 companies for more than four years now.

It requires a great leap of faith, and a willingness to remain consistent for a number of years, before a sufficient body of evidence can be assembled to point to the real value of risk management. Since every project is to an extent unique, and since we can never know what would have happened if we had not done what we did on the specific project, the evidence on any single project will always be inadequate. That is why I believe that we must be rigorous in assembling data in sufficient quantity and with a sufficient basis of comparability that we can see whether the true shape of our project results across the whole portfolio is more like Diagram 1 or Diagram 2.

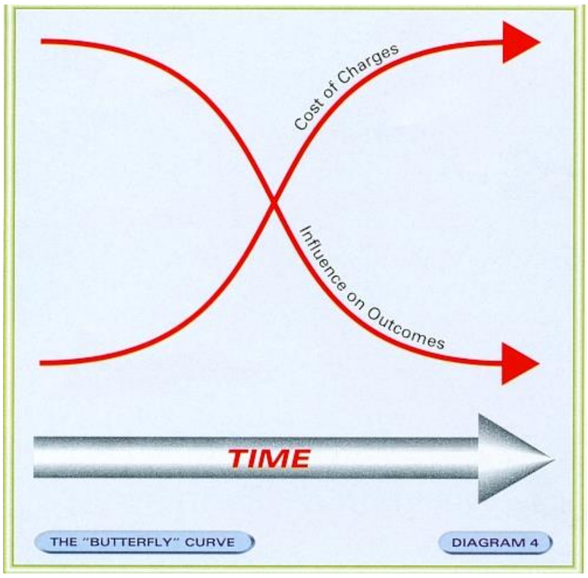
4. We don't understand what a 'discipline 'involves.

Risk management is a discipline rather than a tool or technique. It is more akin to the martial arts, than it is to a handgun! Risk management involves techniques, but the ultimate aim of the techniques is to shape the way a project manager and project management team thinks. It is very akin to safety practices on a construction site you can only make a difference when everybody thinks differently, and consequently behaves differently.

There are no easy routes to mastery of risk management. The journey requires learning new ways of thinking and then practising them until they become second nature. And in the modern world of management techniques, and of 'quick fixes', the whole concept of disciplines can easily be dismissed as a mediaeval concept that is no more relevant than the 'craft guild'.

What can we do about improving risk management?

As I said earlier, I have no simple answers to peddle. Many organisations are embarking on the journey of improving risk management, and some are delivering good results. Others are finding the going tough. Yet more are finding that they make headway when a 'heavyweight' champion for risk management exists, but quickly revert to type when they leave the Organisation.



I suspect that the answer contains at least five elements, which broadly arise from the diagnosis that I offered above.

- A prerequisite is that the Organisation collectively creates the will to deliver projects to the same standards of quality and conformance to plan that it delivers products or services. This requires a sustained effort over several years on the art of management at all levels, with a recognition that the way of thinking that needs to change is everybody's, not simply the project managers.
- Evidence needs to be gathered systematically over years of performance against plan along many dimensions (cost, schedule, quality, scope, customer satisfaction etc.), and corresponding data about the practices that deliver this performance.
- The project management 'community of practice' should take responsibility for developing appropriate risk management practices, and for improving them continually until they are truly world class. (I shall say more about the practicalities of creating and sustaining a community of practice in my next article.)
- Risk management should become a central part of the culture and practice of the Organisation. This will require sustained education of all concerned, as well as the emergence of internal role models, and the propagation of actual success stories.
- Initially, at least, until the habits are established within the organisation, there probably needs to be a mandate issued to all project managers and project teams that they should rigorously follow established corporate standards in the identification, analysis, management and response control of risk.

But surely the prize is worth it. The numbers are dramatic. As we enter a probable economic slowdown, with an expensive currency on the world market and a shortage of key skills, can we truly afford to skimp on risk management?

Terry Cooke-Davies

This article is the fifth of a series that has emerged from conversations between Terry Cooke-Davies and Eric Wolstenholme. The conversations have ranged widely, in the context of a PhD thesis that Terry is submitting under Eric's supervision.

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