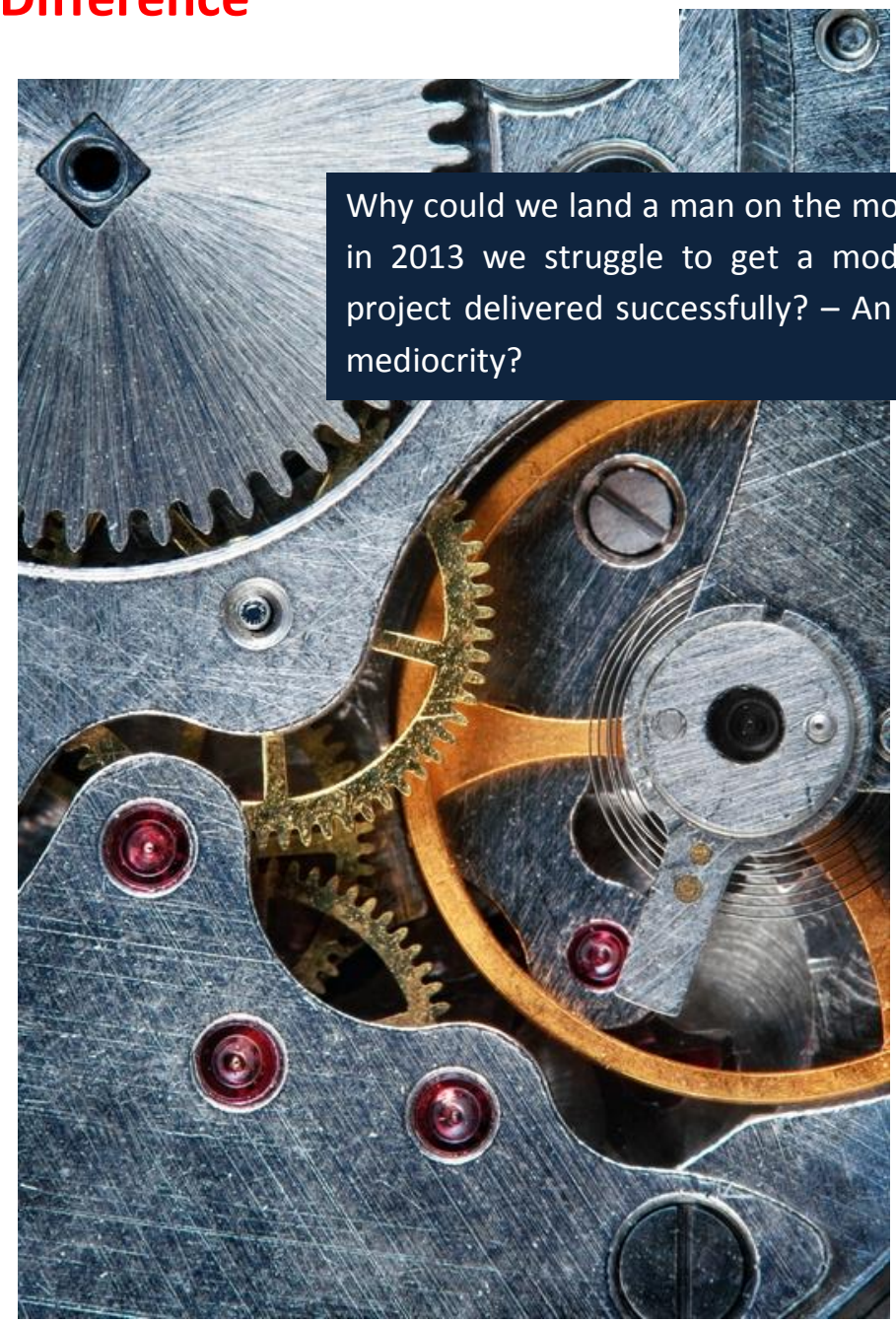
Making Project Risk Management

Make a Difference



Why could we land a man on the moon in 1969 yet in 2013 we struggle to get a moderate sized IT project delivered successfully? – An acceptance of mediocrity?

rmp Risk Management Partners

About the paper

This paper was inspired by a request by the Sydney based CPA/CSA Risk Discussion Group for me to present on the topic of project risk management at their evening seminar in March 2013. This group consists of members of one or both of the CPA Australia or Chartered Secretaries Australia.

I met with volunteer committee members from the discussion group and worked up a theme that asked the question of group members as to whether project risk management really does make a difference to the success of projects.

Risk professionals have copped plenty of flak over recent years, in particular after some of the high profile finance industry collapses associated with the GFC. Much has since been said, in particular by risk and compliance professionals, that it was not risk management that was at fault, it was the failure of organisations to adequately adopt its principles and guidelines. After all, risk management is like any business discipline, there is no guarantee it will be applied well by every organisation. The Australian and Canadian banks, overseen by their respective regulators, are good examples of financial market risk being managed well prior to and throughout the GFC.

This kind of thinking can of course equally be applied to projects. Without doubt the vast majority of project managers and project management methodologies include risk management in their armoury. The question the presentation to the CPA/CSA Risk Discussion Group asked is whether project risk management is really making a difference. You won't be surprised to find the theme of this paper is that project risk management can make a difference, if done the right way!

In order to spice up the evening seminar a little I ran a brief online survey for participants in the lead up to the presentation asking their opinion about the impact of project risk management on project success. There was also a Q&A session after my presentation with project managers from Optus and Westpac to bring some opinions from those on the front line of project management.

This paper captures the results of the survey, my opinions on how project risk management can make a difference and the key points raised during the Q&A.

About the author

Bryan is Director, Risk Management Partners (www.rmpartners.com.au) and has worked in the risk management field since 1987. His practical risk experience stems from his role as a chemical engineer, while he further developed his risk management skills and expertise in consulting roles prior to starting Risk Management Partners in 2001. His special interests include assisting risk professionals to enhance their personal skills and the challenge of demonstrating the benefit of risk management to senior decision makers.

Bryan is also a Director of the Risk Management Institution of Australasia (RMIA).

Survey Results

The survey asked about participants' experience of project success vs failure, the success or otherwise of project risk management and the main causes of project failure. As I said on the evening, with twenty-eight responses to the survey no one should be running out the door to complete a PhD using the results. However, there were a couple of themes that came through clearly.

Project Success vs Failure

The theme emerged that the vast majority of projects don't fail, however, nor are they particularly successful. 63% of participants indicated that more than 80% of projects do not fail. This increased to 93% indicating more than 60% of projects do not fail. On the other hand only 15% felt more than 80% of projects were highly successful which increased to 30% for more than 60% of projects. **In between there is a lot of mediocrity**.

Project Risk Management

Participants were asked if a good project manager is automatically a good risk manager. Only 11% agreed that this was "Always" the case while a further 43% said it was "Usually" the case with comments that included:

- Good is not just time and budget
- Good at inherently perceiving risk but risk is often seen as a compliance issue
- Good if trained but most have not been well trained

Participants were also asked if they believed good risk management makes a difference to any project. Not surprisingly for a risk discussion group the majority (54%) indicated this was "Always" the case while a further 40% indicated this was "Usually" the case. There was a recurring theme in the comments that although it was of great benefit and that most project managers do it subconsciously if not formally, **it only increases the likelihood of success but does not guarantee it.**

Causes of Project Failure

The final question asked participants to rate seven potential causes of project failure. The results are shown in the table below.

Rank (1 is most common cause)	Potential cause of project failure
1	Impossible time frame/budget/functional requirements set by senior management and/or an overly optimistic project team
2	Poor governance/oversight – eg decisions weren't made during implementation to adequately resource the project team or address core issues
3	Poor risk assessment (unidentified risks) – failure to identify critical issues that needed to be managed
4	Poor project management – eg poor execution of processes/systems or oversight of work teams
5	A focus on project management process over delivering the planned project benefits - a disconnect between the project team and end users
6	The project was solving the wrong issue – inadequate understanding of business requirements
7	Changes to the organisation's environment – either external macro change or the organisation shifted direction while the project maintained course

It was quite clear that although risk assessment was important to this group, there were more important causes of failure that some may consider go beyond risk assessment. However there is a chicken vs egg question that must be raised. If we had good governance for example, would we not have a requirement for risk assessment and if we completed a good risk assessment would we not identify impossible timeframes or budgets and would we not use the good governance process to bring this to the attention of management?

Project Success vs Failure

In order to better ask and answer the question about if and how risk management makes a difference to projects, I explored three different projects. Two highly successful projects and one not so successful.

Apple

I knew the Apple iPhone and iPad had been successful projects, however, I had never sat down and thought too hard about why. A little research took me to an article in Time Magazine by Tim Bajarin entitled "6 Reasons Apple is so successful". The article drew out some key points for me:

- "They" made what people wanted. They being the technicians behind the project. They made something that they wanted. Now you and I might not have known we wanted such things, however, the technicians knew what was possible and therefore could imagine what they could have and they went ahead and built them.
- Ease of use. Bajarin reminds us of the extremely strong emphasis on industrial design that Steve Jobs drove within Apple.
- Simplicity – Bajarin notes that there is only one iPhone and it does the basic things people use it for very well. Same with the iPad, it is incredibly simple to use, **even a board director can use it** so they don't have to lug around mounds of paper!

Project Apollo

I opened my presentation with the question "Why could we land a man on the moon in 1969 and in 2013 we struggle to get a moderate sized IT project delivered successfully? – An acceptance of mediocrity?" and so it seemed appropriate that I should explore what underlay the success of Project Apollo. Fortunately NASA itself provides a great research resource via their history website where I found an article titled "Project Apollo: A Retrospective Analysis". The article provides clear indications of why the Apollo program was so successful:

- **Desire:** Project Apollo was created out of a strong desire – in 1961the US and the Soviet Union were in the middle of the Cold War and the Soviets had the first win with their space program by launching Yuri Gagarin as the first man into space. Once President Kennedy announced the plan to land a man on the moon before the end of the decade the desire was stronger than ever to succeed.
- **Capacity:** NASA obviously had strong capabilities. In addition, appropriate levels of funding were available because of the strong US economy and, bolstered with an influx of migrants post the Second World War, NASA had access to a highly skilled workforce.
- **Budget and Timetable:** Officials were able to gain approval for a budget of $35b (in 1970 $) which gave them a 75% margin for error over their initial budget. They had also estimated they could deliver by 1967, however, they were able to extract a two-year contingency margin. It was interesting to note the final cost was $24b in 1970 $ or $90b in today's dollars.
- **Resources:** "By 1966 the agency's civil service rolls had grown to 36,000 people from the 10,000 employed at NASA in 1960. Outside researchers and technicians meant contractor employees working on the program increased by a factor of 10, from 36,500 in 1960 to 376,700 in 1965. Private industry, research institutions, and universities, therefore, provided the majority of personnel working on Apollo". *38*

- **Support:** The US people were fully behind the project and therefore so were the politicians.
- **Program Management**: The NASA administration understood the enormity of their challenge and consequently "an omnipotent program office with centralized authority over design, engineering, procurement, testing, construction, manufacturing, spare parts, logistics, training, and operations" was created. NASA went on to say "It may turn out that [the space program's] most valuable spin-off of all will be human rather than technological: better knowledge of how to plan, coordinate, and monitor the multitudinous and varied activities of the organizations required to accomplish great social undertakings."*44*

Neither the Apple, nor the Apollo article mentioned risk management or risk assessment. Although these would have existed if not explicitly called such, it is obvious that project success is influenced by much, much more. However, I am still of the view, that good project risk management does make a difference. Another quote from the Apollo article reinforces my view:

> "Accordingly, Apollo used redundant systems extensively so that failures would be both predictable and minor in result. The significance of both of these factors forced the third factor, cost, much higher than might have been the case with a more leisurely lunar program such as had been conceptualized in the latter 1950s. As it was, this was the price paid for success under the Kennedy mandate and program managers made conscious decisions based on a knowledge of these factors."*43*

Although neither risk assessment nor risk management is mentioned, this note is evidence of risk principles being applied (developing contingencies i.e. redundant systems) and highlights how good risk management principles drive good behaviours and decision-making.

"Boisjoly spent the rest of the day in his office, not even able to speak when people stopped by to ask how he was doing."

Roger Boisjoly

Roger Boisjoly was a key player in an incident described in James Chiles book "Inviting Disaster". Under the chapter heading "Rush to Judgment – When flagship projects run out of time" Chiles tells Boisjoly's story.

Boisjoly was an engineer at Morton Thiokol, the firm responsible for the design of the space shuttle rocket booster that sent US space shuttles into orbit. Their design included the "O-ring" that failed on the Challenger shuttle in 1986. In a telecon with NASA the evening before the launch he had convinced his manager to refuse to sign off on the launch approval due to problems associated with inflexibility of the "O-ring" under cold temperatures. After much harassment from NASA, due to pressures of public image after several delayed launches, objections were withdrawn and sign off on the launch was given at a higher level. Boisjoly watched the launch the next morning at the behest of his manager only to be shattered by the resultant mid-air explosion. "Boisjoly spent the rest of the day in his office, not even able to speak when people stopped by to ask how he was doing."

Although the space shuttle program would be viewed by many as a success, it cost the lives of 14 astronauts in two separate events. In the case of Challenger, the risk had been identified, however, the pressure felt by decision makers from external stakeholder expectations was enough to cloud decision making.

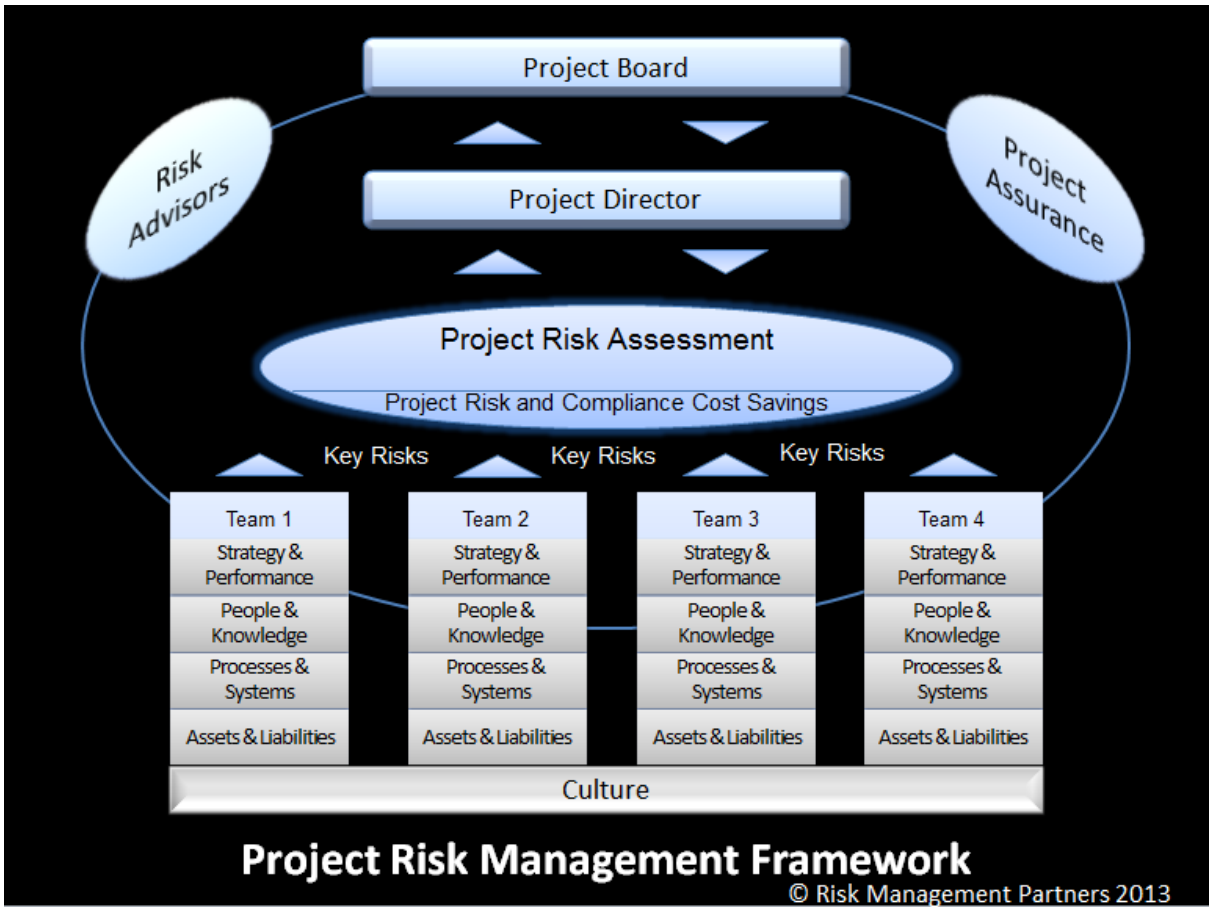
Reviewing these three examples, where risk management is not mentioned explicitly beside success and risk was explicitly identified and concerns overridden, the question can rightfully be asked, "Does project risk management make a difference?" **Here is how it can.**

Effective Project Risk Management Frameworks

Project managers are risk managers. They are constantly foreseeing obstacles and roadblocks and negotiating their team around them. They are good at managing the known risks, the ones that hurt them recently or the ones that hurt them significantly a long time ago. The problem is that there are a plethora of risks to manage and we struggle to manage all of the risk equally well all of the time.

A well designed risk framework within a strong governance framework goes a long way to ensuring we manage most of the risks equally well most of the time. Below is a simple project risk management framework. It is based on my views of an effective enterprise risk management framework which, given projects often take on the look and feel of an organisation, makes perfect sense.

Similar to an organisation as a whole, the essence of a project and of each project team is the formulation of an execution strategy with a performance expectation. In order to execute the strategy and achieve the expected performance, project teams need people with knowledge. People will need to build and operate processes and systems in order to produce results. Along the way the project will acquire assets and liabilities. Underpinning all of these building blocks of the project team is the cultural strength of the organisation.



The role of the project risk framework is to put into place processes that allow risks facing each project team to be identified, assessed and escalated as required by a well-articulated risk appetite to a level within the project hierarchy where a whole-of-project risk assessment can be conducted. At this level the project manager(s) are looking to identify individual team risks of significance, risks that are occurring between team silos that no one is managing or less significant risks that are recurring across project teams that are, when accumulated, significant for the project as a whole. A typical one would concern inefficiencies in a process or system or an ineffective asset.

If the senior parties in the governance structure do not engage with the risk process, if they do not insist on good quality risk information and know what to do with it, **the process will fail**.

Working with the **Project Director** and the **Project Board**, the **Project Manager(s)** are then able to prioritise risks for treatment and/or monitoring.

The role of **Risk Advisors** to a project team is to help in the application of the risk process. To assist with risk identification, with analysis of likelihood and consequence such as through the provision of risk data and to remind project teams about the agreed risk appetite that should be driving risk reporting.

The role of **Project Assurance** is broader than just risk, however, in relation to risk their role is to verify the required risk processes have been followed and that the information making it to the project board is accurate and appropriate.

You may have noted there is no mention of KRIs (Key Risk Indicators) in the above framework. It is not that they are unimportant, however, I see these linked to KPIs and part of the overall governance structure. The simplified framework I portray here is focusing on ensuring a good flow of information about emerging or potential risks. Monitoring is an essential element, however, it would hopefully be integrated into the overall project reporting framework. I will be exploring this element in more detail in a future discussion paper.

On a final note regarding effective risk frameworks, project or otherwise, it is a two-way street. If the senior parties in the governance structure do not engage with the risk process, if they do not insist on good quality risk information and know what to do with it, **the process will fail**. If senior management do not show interest it is rightfully assumed that they believe risk is a compliance exercise and is of no value to the project. It follows that many, perhaps most, project managers will then treat it the same way and the effectiveness of the risk framework will be lost.

Effective Project Risk Assessment

An effective project risk framework includes effective project risk assessment. Many a project risk register I have seen is of poor quality with bland, generic risks. One could change the name of the project and reissue it to another Project Board that doesn't know what a good risk register looks like and they would be perfectly satisfied – the box would have been ticked.

> …have we accepted too readily that projects, in particular IT projects, are complex and therefore difficult and therefore a succession of significant surprises is tolerated?

Returning to my earlier theme of mediocrity, have we accepted too readily that projects, in particular IT projects, are complex and therefore difficult and therefore a succession of significant surprises is tolerated? We have IT project managers too afraid to predict accurate schedules and budgets for fear of the project not being approved and we have managers doubling the schedule and budget estimates as their experience has been so poor. Have we reached a stalemate?

My risk experience stems originally from the chemical industry, a complex industry. We developed risk assessment methodologies such as HAZOP (Hazard and Operability) to deal with complexity. Why, because we had no choice. We were killing and maiming too many people. Society demanded better of us. I think it is time that senior management of organisations begin to demand the same of their project teams. Landing a man on the moon in 1969 was not an accidental success, it was planned. Projects across our business landscape can be much better planned if the risks are better identified. That is why, I and many risk advisors like me, have a suite of risk assessment tools available to us to use for different situations to identify the unexpected.

Effective Project Culture

Notwithstanding my stance on project risk frameworks and risk assessment, it does boil down to culture. During the panel discussion that followed my presentation to the Risk Discussion Group, issues of culture were most prominent. Comments were made to the effect:

1. Project Boards have a tendency to start every meeting with a discussion on the project's budget and schedule with much less of a focus on outcomes. This drives a culture of focus on budget and schedule at the expense of outcomes.
2. An example of the impact on culture was a tendency for project managers to withhold their contingency margins and only release them very late in the project for fear of being held accountable for the rare, unforeseen event, towards the backend of the project. The group discussed this impact on the finance department who are trying to make accurate projections for program or organisational senior management.
3. Project Boards are often uneducated in governance processes and don't know what they should be demanding. It was noted that Project Boards with a better appreciation that risk is a valuable process move the risk discussion to the front of the agenda. This sends a clear message to the project team.

In Closing

Why could we land a man on the moon in 1969? Because the USA were determined to do so and they had everything they needed available to them to make it happen. Why do projects in today's society have such a poor track record? It is not the complexity of modern day life, it is an acceptance of mediocrity. If it is important enough, if we demand performance, we can do anything. If we demand performance within the scope of our project risk management programs, project risk management can and does play a very important role in guiding us to achieve our goals.

Acknowledgements

I would like to thank the CPA/CSA Risk Discussion Group for inviting me to present to their members. I would particularly like to thank committee members Darren Cheng, Andrew Crawford and Peter McGee.