# Proactive Project Surveillance


There is no such this as a risk free project! Every project has a probability of succeeding (usually set around the 80% level) but if there is a probability of success, there has to be a corresponding probability of failure: 80% probability of success = 20% probability of failure. Effective surveillance systems are needed to identify which of the projects are currently candidates for failure, in sufficient time to take action that will change the probability in a favourable way. Probability in not synonymous with certainty!

Determining the acceptable level of risk for an organisation to accept is a governance function[1]. The consequences of these 'risk settings' sets the framework for selecting projects to undertake[2], and the role of project surveillance and reviews is to create an effective system that identifies problems early and helps resolve issues before they become serious. Whilst a percentage of all projects are probably going to fail, probability is not certainty, the future is not pre-determined and the degree of failure is amenable to change.

The term surveillance is derived from the French word 'surveiller' and has a military pedigree. It refers to keeping watch on a location or person. In the case of project management, the notion of surveillance begs the question, "What do you watch?" There are probably two answers to this question:

- Firstly, through the routine monitoring or project reports an effective PMO should be able to effectively monitor the overall progress of a project on a routine basis. This is a relatively passive process[3].
- A more in-depth assessment of the project team's ability to effectively deal with its challenges and opportunities, to provide assurance the management team are in good shape requires a structured review.

With the possible exception of Formal Audits (discussed below), the purpose of any assessment should include:

- Providing assurance the project or program is still meeting the strategic objectives it was created to facilitate, support or enable.
- Providing assurance that the information available from within the project is reasonably accurate, relevant, timely and complete (particularly performance data).
- Identifying emerging issues and problems in sufficient time to prevent them becoming serious (see 'Early Warning Indicators' below).
- Identifying opportunities for improvement in the project and assisting the project team to implement the improvements effectively.
- Gathering lessons learned[4] for use on other projects.

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[1] For more on ***Governance*** see:
- Organisational / Corporate Governance: http://www.mosaicprojects.com.au/WhitePapers/WP1033_Governance.pdf
- Project Governance: http://www.mosaicprojects.com.au/WhitePapers/WP1073_Project_Governance.pdf

[2] For more on the options and consequences of choosing various project risk settings see our blog, ***Stakeholder Risk Tolerance***: http://stakeholdermanagement.wordpress.com/2012/04/03/stakeholder-risk-tolerance/

[3] For more on ***PMOs*** see: http://www.mosaicprojects.com.au/WhitePapers/WP1034_PMOs.pdf

[4] For more on ***lessons learned*** see: http://www.mosaicprojects.com.au/WhitePapers/WP1004_Lessons_Learned.pdf

- Determining if the project is still viable (particularly during Gateway Reviews), and recommending either closure of, or fundamental changes to, projects that no longer contribute value to the organisation.

Audits and reviews should not focus on a detailed check of 'i dotting and t crossing'. As with good governance, the core purpose of the review should be focused on creating sustainable value for the organisation; following due processes should be seen as a facilitator and protector of value creation – *for the guidance of wise people and the blind obedience of fools*.

Undertaking any review is relatively straightforward; however, the review process is of no value without effective follow up. Action is required to deal with the issues, opportunities and problems the review has identified!

## The Key Role of Project Reviews and Assurance

Effective project reviews help the organisation's management understand what's really going on within each project. Routine oversight and reporting processes (typically involving a PMO) deal with project information 'as-is' on a weekly or monthly basis; an effective review looks deeper into the project to understand 'why' and importantly 'what might be' to highlight emerging opportunities, identify emerging risks and in conjunction with the project team, recommend appropriate actions. After a review everyone should be confident the current status of the project is clearly understood. Review teams help provide this assurance through an independent assessment of key project attributes that cuts across the oversights and biases that we're all prone to[5] (including the project manager and project sponsor).

This type of review tends to have a very different focus to traditional Gateway Reviews (although the two can be combined effectively)[6].

- Gateways are primarily concerned with understanding if the project is still viable from the organisation/customer/end user perspective and authorising on-going investment in the initiative as part of the Portfolio Management processes.
- Surveillance reviews are focused on identifying emerging problems and opportunities in time to do something about them, including: process improvement, lessons learned and providing coaching and assistance to the project team as part of an effective risk management culture.

Review teams provide three types of information to project stakeholders:

1) **Performance improvement information:** project managers need a clear view of what's happening on their projects so they can manage them effectively. Reviews provide an independent assessment of status and of how the project, and the project's supporting management (Project Control Boards, Sponsors, etc.) are performing against accepted *good practice*. Focused support and coaching helps the project management group identify gaps in their understanding and define appropriate improvement strategies for implementation.
2) **Management information:** project sponsors, other managers and executives need a clear view of what's happening in the projects they have management responsibility for, across the organisation's complete portfolio of projects. Impartial reviews help ensure that executive decisions are based on validated information:
    a. At the portfolio level[7], the information is used to inform decisions about managing the organisation's overall risk profile and 'net present value' by cancelling projects that no

[5] For more on ***cognitive bias*** see: http://www.mosaicprojects.com.au/WhitePapers/WP1069_Bias.pdf

[6] For more on the ***Gateways and Scorecards*** see: http://www.mosaicprojects.com.au/WhitePapers/WP1092_Gateways-Scorecards.pdf

[7] For more on ***Portfolio Management*** see: http://www.mosaicprojects.com.au/WhitePapers/WP1017_Portfolios.pdf

longer contribute value, redirecting resources, etc.; and for managing any interdependencies and side effects.

b. At the project oversight level, Project Control Boards, Sponsors and other managers need information to understand what support and assistance the project manager needs to optimise the value created by the project's expected outcomes. This is an integral part of the organisation overall Project Delivery Capability (PDC) [8] maturity.

3) **Organisational learning:** information from project reviews is an excellent way to help organisations learn from experience – ***'Lessons learned'***. An effective 'lessons learned' knowledge management system[9] helps project team members see what is really happening and learn immediate lessons about what is and isn't working. At a wider level observations can be incorporated into checklists and other artefacts, transferring the knowledge across the organisation.

Ideally the project review should be primarily a 'peer review process'; project managers helping project managers. This approach helps reduce resistance by eliminating the 'big brother' aspects of the review and is a learning experience for the individuals concerned. Participating in the review process broadens the review team's skills and expertise by giving them the opportunity to see a wider range of projects.

However, despite the benefits, project reviews are stressful for all concerned. Few project teams have spare time to talk to reviewers; review teams need to get up to speed rapidly on complex projects and political pressures are common. Minimising these pressures needs a mature 'review support system', typically part of a strategic PMO.

## The Review Support Role of the Strategic PMO

The PMO[10] can play an important role in reducing 'review stresses' and maximising the effectiveness of the review teams. It achieves this by:

- **Establishing context for regular reviews** - when reviews are conducted routinely, as part of business-as-usual, they tend to be less disruptive, less contentious and more effective. When reviews are exceptional events, they tend to become associated with failure – the mere fact of being reviewed suggests that your project is in trouble; which creates defensiveness and reduces the beneficial effects discussed above. The PMO can establish a routine of regular reviews and schedule and coordinate the reviews and the review teams.
- **Providing and developing a pool of expertise** - review teams need people with expertise and experience in reviewing. The PMO can provide a pool of such people, from within itself and by keeping track of the expertise within the organisation. It can also help grow the pool of expertise by constructing review teams with a view to extending people's experience and providing mentoring opportunities.
- **Monitoring the effectiveness of the review process** - the PMO should gather feedback from project teams and executives on the effectiveness of each review and the value of its outputs. This feedback should be used to refine review schedules, adjust the structure of review teams, update the review processes, protocols, etc.
- **Maintaining the review processes and protocols** - checklists and guidelines help review teams decide what aspects of a project to focus on, and what to look for when reviewing these aspects. The PMO should ensure these materials are accessible and are updated to reflect any new lessons learned from completed reviews.

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[8] For more on ***Project Delivery Capability*** see: http://www.mosaicprojects.com.au/WhitePapers/WP1079_PDC.pdf

[9] For more on ***Lessons Learned*** see: http://www.mosaicprojects.com.au/WhitePapers/WP1004_Lessons_Learned.pdf

[10] For more on the ***Role of PMOs*** see: http://www.mosaicprojects.com.au/WhitePapers/WP1034_PMOs.pdf

- **Tracking project-level actions** - the PMO should track the progress of agreed actions at the project level as part of its routine oversight process. Agreed actions should be incorporated into the project plan by the project manager. The updated and agreed plan is then monitored by the PMO on a routine basis.
- **Supporting PDC improvements** - where reviews identify actions outside the scope of the project team, the PMO can help coordinate and track these actions in support of the project manager's regular communication with their project board and other executives responsible for the organisation's overall Project Delivery Capability[11] (PDC).
- **Embedding lessons learned into the KM system and organisational standards** – lessons learned and any recommend improvements to the organisation's project methodology and associated templates, guidelines, etc need reviewing, agreeing and actioning. The PMO typically coordinates updates to the lessons learned knowledge management system and to the organisation's methodology. It may also develop supporting artefacts such as training materials, etc.
- **Providing administrative support** - the PMO should be responsible for managing the review support functions such as scheduling meetings, booking rooms, recording minutes, etc. The administrative workload involved with running a review programme across a substantial portfolio is significant, and effective admin-support is essential to make the most effective use of the skilled resources involved in both the review teams and the management of the projects being reviewed.

All these activities suggested for the PMO support the work of the review teams, freeing them to focus on undertaking effective reviews, minimising the amount of time needed for each review and maximising the value gained by the organisation from the review process.

## Types of Review and Audit

There are a number of common assessments that generally have similar features although they may be called different names depending on the organisations methodology and conventions. The main types of assessment include:

### Project Reviews

Reviews are typically mandated, formal, processes that are part of the organisations governance framework or occasionally the contract. The purpose of the review is to determine if the project should start or continue. Stage Gate reviews are one common approach to this type of process[12].

### Project Health Checks

Health checks are the most common type of review and can include aspects of all of the review types discussed. Health checks may be formal, and are frequently focused on assessing performance against KPIs, value analysis and/or specific functionality such as front-end constructability reviews. The key questions any health check should answer include:

- Are the right leaders with the appropriate skills, behaviours and attitudes in place? This includes the sponsor/SRO, steering committee members, and project manager as well as other key leaders.
- Does the overall team describe the objectives and business benefits in the same way? Clarity of purpose is an essential prerequisite for building success.
- Are decisions made in a timely way? Particularly decisions requiring external approvals from clients or senior management - late decisions delay work and increase risk.

[11] The ***PDC Framework*** is described at: http://www.mosaicprojects.com.au/WhitePapers/WP1074_PPP_Taxonomy.pdf

[12] For more on the ***Gateways and Scorecards*** see: http://www.mosaicprojects.com.au/WhitePapers/WP1092_Gateways-Scorecards.pdf

- Are results being achieved on time and on budget? The quality of the overall controls function linked to the effectiveness of management are key drivers of success.
- Is the team working cohesively and effectively? Good processes that are used and efficient use of team members time maximises productivity.

**Benchmarking**

The systematic comparison of two or more projects (or element within the project), analysing quantitative or qualitative aspects of project performance with recognised good practices/performance. Typical comparisons include:

- Quantitative measures
  - Cost performance
  - Time management data
  - Safety data
  - Technical evaluations
- Qualitative measures
  - Stakeholder assessments / engagement
  - Environmental impacts

The purpose of benchmarking is to either identify opportunities for improvement or to compare projects to assess where the best future investments should be made.

**Peer reviews**

Proactive project teams need not wait for a formal review process. In many circumstances simply asking an experienced colleague to look at a proposed solution, new process or other issue can validate the work being done and suggest options for improvement.

**Post project evaluations**

May occur as part of the project closure or later.

- Reviews conducted at project close (or phase close) have a primary purpose of collecting lessons learned from within the work of the project, these reviews are best undertaken by an external reviewer with the project manager as a primary 'witness' contributing information and ideas.
- PIRs (Project Implementation Reviews) are conducted some months after the project has finished with a primary purpose of assessing the realisation of benefits and value within the organisation based on the use of the project deliverables.

**Project Audits (Formal)**

Audits are a formal assessment and checking of project performance, including assessing compliance with laws or regulations, validating decision trails, and/or checking conformance with systems. Audits are usually instigated in response to an identified issue or problem, sometimes to look for fraud or inappropriate practice; however they may be random or required at set stages of a project. In many environments, the term 'audit' has specific meaning that may involve legal enforcement or rights, typical examples are audits undertaken by the USA Governments, GAO and the Australian and UK Governments National Audit Offices these statutory bodies have legal oversight of all government departments and projects within their respective jurisdictions.

**Project Audits (PMI)**

The *PMBOK® Guide* uses the term 'audit' to refer to internal reviews of specific aspects of project performance including procurement, risk management and quality management. This type of audit more closely resembles a project evaluation (above) with a focus on identifying opportunities for process improvement within the project and gathering lessons learned for use in other projects.

## Early Warning Indicators

A consistent theme in most reviews is identifying emerging issues and problems early enough to allow effective action to be taken to prevent or minimise the problem; this requires the recognition of 'early warning indicators'. Some of the key indicators of emerging problems the review teams should consider include:

**At project/program start-up**

- Unclear thinking, evidenced by the lack of a clearly defined reason for undertaking the project (eg, vague objectives, poor project definition).
- The lack of an implemented governance framework, including an unclear description of the project, a lack of clarity in how the project fits into the overall program of works or how its benefits will be realised.
- Sponsor(s) with unclear roles or failing to fulfil role[13].
- Competing agendas/politics evidenced by inconsistent arguments about agendas, uneasy comments and body language.
- A poorly developed business case[14].
- The lack of understanding of the size and complexity of the project and the resources likely to be required.
- A lack of clarity around the assumptions made about the project and the associated risks.
- A perceived disconnect between the needs of the organisation and the solution proposed by the project; the needs are considered to be 'not real'.
- The need to develop new technology for the project.
- Significant cultural issues, particularly unfamiliarity with the dominant culture.
- The major risks not identified and documented.

**During the planning phase**

- The lack of a good business case.
- A lack of leadership.
- The failure of effective team formation to occur; evidenced by a strained atmosphere, the lack of openness and poor communication between the main actors, uneasy comments and body language, the unwillingness or parties to share relevant information.
- Deteriorating stakeholder relationships, particularly between executives associated with the project; evidenced by a lack of overt support and parties voicing reservations and hedging their positions.
- The lack of clear roles and responsibilities, evidenced by the emergence of misunderstandings of roles and responsibilities between major parties to the work.
- Identified skills shortages / missing competencies within the project team requiring undue reliance on key consultants, suppliers and/or contractors to 'fix' the problem.

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[13] For more on the ***role of the sponsor*** see: http://www.mosaicprojects.com.au/WhitePapers/WP1031_Project_Sponsorship.pdf

[14] For more on ***business cases*** see: http://www.mosaicprojects.com.au/WhitePapers/WP1018_Business_Case.pdf

- Documents not complete, including missing information, values, etc., in key documents. Or poor quality documentation and project plans.
- Assessments not performed, procedures and guidelines not followed.
- A lack of clarity in decision making; evidenced by major decisions remaining in dispute and the complications arising from this issue, confusing or wavering changes in position over time, and/or uncertainty or unwillingness to conclude a decision.
- A lack of understanding within the project team evidenced by vague answers to critical questions.
- The major risks not identified, documented and quantified.

**During the execution phase**

- A lack of leadership and leadership issues[15], including a lack of trust in the project organisation.
- Continually unfulfilled promises.
- The lack of documentation, late design information.
- The failure of effective team formation to occur; evidenced by a strained atmosphere, the lack of openness and poor communication between the main actors, uneasy comments and body language, the unwillingness or parties to share relevant information.
- Watermelon reporting – *all green on the outside but red underneath*. This generally indicates significant management problems with senior managers either refusing to accept bad news or 'punishing' the bearer of bad news. Either option prevents effective problem solving. May indicate ineffective KPIs and/or controls[16].
- An excessive volume of change orders (Engineering Change Proposals – ECPs), particularly those defined as 'no-cost, no-time'. Put all of the ECPs into three classifications to determine the source of the problem:
    - Things they should have known about at the outset but chose to ignore (didn't want to know);
    - Thing they really could not have known about (never been done before) and were not on the risk register (could not have known);
    - New capabilities that were not on the original contract (did not know about).
- A high / increasing number of open issues[17], particularly if many issues have been open for an extended period.
- An excessive optimism bias, risks ignored or minimised, no contingencies in schedules and cost plans, etc.
- A lack of understanding within the project team evidenced by vague answers to critical questions.
- Excessive overtime (or underutilisation of key staff).
- High levels of 'churn' in staff positions, particularly people in 'acting positions' that lack authority to make decisions.
- The lack of effective decision making, frequently changed decisions and/or the lack of commitment to make decisions.
- Contracts let on price rather than capability resulting in unskilled or 'stretched' subcontractors.
- Contract obligations not fulfilled.

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[15] For more on ***leadership*** see: http://www.mosaicprojects.com.au/WhitePapers/WP1014_Leadership.pdf

[16] For more on ***designing KPIs*** see http://mosaicprojects.wordpress.com/2014/08/05/designing-effective-kpis/

[17] For more on ***managing issues*** see: http://www.mosaicprojects.com.au/WhitePapers/WP1089_Issues_Management.pdf

- Plans, reports and status information provided late and/or not clear. Milestone and activity definitions unclear[18].
- A high level of subcontractors' cost and extension of time claims.
- All risks not identified, documented, quantified, prioritised and managed proactively.

### Common Causes of Failure[19]

By being aware of the causes of failure, the surveillance team can anticipate problems. This list tends to overlap the one above but is derived from actual failures rather than indicators of emerging failure:

- **A mismatch between the project and the organisation's strategic priorities** - eg, the project is focused on time and cost, the organisation needs a specific technical outcome.
- **Lack of management commitment / Lack of organisational support** - The organisation is responsible for properly supporting the projects it has initiated.
- **Ineffective or no sponsorship** - Ineffective project sponsorship is almost a guarantee of failure.
- **Inadequate business case** - A good business case will clearly demonstrate the business benefit of delivering a project and define the objectives, requirements and goals.
- **Undefined objectives and goals** - This is always a problem, if the organisation does not know what it wants, it is impossible to scope a project to deliver the 'unknown'.
- **Inadequate or vague requirements** - This is only a problem if the organisation fails to allow adequate time and appropriate contingencies in the overall scope of the project to define and firm up requirements. Defined requirements are essential for the project to be able to deliver a successful outcome. Initiation
- **Lack of prioritisation and project portfolio management** - Causing competing priorities leading to inadequate support and resourcing for projects.
- **Business politics** - Selected projects should be supported by management. A lack of discipline within executive/senior management (ie, political in-fighting) is usually only present if the organisation is poorly governed and/or lacks a rigorous portfolio management process.
- **No predefined measure of success** - what is really important to the organisation?
- **Unrealistic timeframes and budgets; unachievable objectives** - Fact free planning is always a problem. Initial 'rough order of magnitude' estimates need appropriate contingencies in the initial business case. The project outputs need to be feasible.
- **Estimates for cost and schedule are erroneous** - Estimates should be based on solid foundations. Unrealistic targets are unlikely to be achieved.
- **Ill defined senior management ownership and leadership.** A lack of communication / contact / engagement with senior management.
- **Ineffective engagement with stakeholders** - resulting in ineffective communication.
- **Failure to set and manage expectations** - Unrealistic expectations are unlikely to be fulfilled. From the start of the initiation through the life of the project effective communication to set and maintain realistic expectations is vital.
- **Poor project management technical skills** - Using non-standard approach to project management and risk management.
- **Poor estimating** - Failing to use historical information, formulae, and questions to make sure that the estimate is not a GUESStimate.

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[18] For more on ***project controls*** see: http://www.mosaicprojects.com.au/WhitePapers/WP1093_Project_Controls.pdf

[19] For more on the ***causes of failure*** see also: http://mosaicprojects.wordpress.com/2012/03/25/project-or-management-failures/

- **Poor processes/documentation** - Appropriate processes and documentation are essential for project success.
- **Poor risk management** - All projects are inherently risky. Effective risk management reduces the degree of uncertainty to an acceptable level. Project
- **Lack of a solid project plan**[20] - Leading to the inability to differentiate the stages of project development. The failure to develop an effective project plan guarantees the project will fail. The type of planning required depends on the project methodology.
- **Focusing on price or cost rather than long term value and benefits**.
- **Cultural and ethical misalignment** - Misalignment between the project team and the business or other organization it serves will inevitably cause problems including poor team integration including both clients and supply chain
- **Overruns of realistic schedule and cost estimates** - This is a project failing. Either due to poor management/motivation of the project team or poor risk assessment (leading to inadequate contingencies) or poor estimating.
- **Failure to track progress** - Tracking progress against the plan and adapting performance is central to effective project management.
- **Poor Testing** - Failing to adequately test project deliverables; including:
  - Poor requirements which cannot be tested
  - Failing to design a testable system
  - Failing to develop a realistic and effective test plan
  - Failing to test effectively with skilled staff
  - Inadequate time and budget allowed for testing.
- **No change control process / Scope creep** - A lack of effective change management processes is primarily a project failing, however, organisational management should require effective change management to be in place and support the change management processes.
- **Poorly defined roles and responsibilities** - The organisations management is responsible for defining roles and responsibilities in the overall management stakeholder community; the project manager is responsible for the organisation within the project team.
- **Team weaknesses** – Inadequate / incorrectly skilled resources - Having people who are ill-prepared to complete a task can be worse than not having anyone. The organisation is responsible for providing adequate internal resources for the project, the project is responsible for defined training and procuring appropriate contracted resources.
- **Lack of user input** - The organisation is responsible for organising the necessary input from end users. The project is responsible for requesting and defining its needs and making appropriate use of the information provided.
- **Poorly managed – project manager not trained/skilled** - The organisation is responsible for appointing an appropriate project manager and providing him/her with appropriate support, training and coaching.
- **Inflexible processes and procedures, templates and documentation** - Any imposed process needs to be as light as practical to meet the governance needs of the organisation without inhibiting the work of the project.
- **Insufficient or Inadequate resources / lack of committed resources (funding and personnel)** - The organisation is responsible for properly resourcing the projects it has initiated. If the resources don't exist or are already fully committed elsewhere, this is an initiation failure; if they are simply not made available it is a support failure.

[20] For detailed ***schedule validation*** using the DCMA 14 point check list and appropriate tools see: http://www.mosaicprojects.com.au/WhitePapers/WP1088_DCMA-14-Point.pdf

- **Poor communication / Stakeholder engagement** - People tend to fear what they don't know, therefore effective communication with stakeholders is vital if the project is to capture their support, and keep it. The project is responsible for project based communications; the organisation change manager (sponsor) is responsible for communication in support of the overall change initiative. Benefits / Project
- **Poor or ineffective organisational change management** - The organisation has to implement, accept and use the project's deliverables to generate value. Failures at the organisational change level mean most of the planned benefits cannot be realised.
- **Stakeholder conflict** - The organisation is responsible for properly supporting the projects it has initiated. This includes the 'through life' management of stakeholders starting prior to initiation and continuing through to the realisation of the benefits.
- **Inability or unwillingness to stop a project after approval** - 'Death march' projects destroy value. A key element of effective portfolio management is to stop wasting money and resources on projects that can no longer contribute value to the organisation.

## Conclusion

When an organisation's management is assured it has a clear understanding of what's really happening within its projects and programs, managers at all levels are more likely to make better decisions about how to best manage the on-going work of each, to maximise the overall value returned from the organisation's investment in its portfolio of projects and programs. Effective reviews provide clear, validated information to decision makers, so they have the basis needed for making good decisions.

It is important to recognise some projects will always fail; organisations take short term risks in order to gain the long term benefits from the new products, services or results the projects help deliver. The secret to success is vigilance backed up by informed action; effective surveillance systems will identify emerging points of failure before they become catastrophic; and help the organisation learn from experience through an effective 'lessons learned' knowledge management system.

Project reviews are an effective way to achieve both of these objectives, and a well structured PMO can play a vital role in setting up and supporting an effective review and assurance programme.

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