

Comparing PMBoK and PRINCE2 in 2013

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Abstract

This paper reports on a detailed comparison of the latest versions of the PMBoK (5th edition) [1] and PRINCE2 (5th edition) [2]. We compare the two methods in a number of ways: the authority attached to each, their underpinning philosophies, the major features of each method; the approaches of each method to a selection of issues of importance to project managers, the impact of each method on other key project stakeholders; the usefulness of each method to organisations; the recognition of accreditation in each method and supporting materials.

With respect to the role of an individual project manager, the overlap between the methods has increased since the previous versions were released. While PRINCE2's guidance in several knowledge areas (communications and quality) is superior, and its guidance in several other aspects such as risk analysis and estimating has improved, the PMBoK's guidance in most other technical knowledge areas is deeper.

There are several critical differences between the methods. Firstly, PRINCE2 provides valuable guidance relating to the externalities of projects, namely governance and benefits, about which the PMBoK is essentially silent, such as how to establish an effective project governance structure and the use of the Business Case as the primary control over the life of the project. Other differences, such as the PRINCE2 requirement for role clarity for everyone involved in a project, the project assurance function, the concepts of management stages and tolerance around estimates, and Product Descriptions, are also valuable concepts for organisations. Finally, PRINCE2's guidance to team managers in areas such as work packages and quality, about which the PMBoK remains almost silent, is another key difference.

While PRINCE2 remains a better choice as the basis for an organisational project management method, the two methods are better regarded as complementary, and not incompatible. Their remaining differences make each attractive to different stakeholder groups.

Keywords: The PMBoK, PRINCE2, comparison, methodology, organisational project management, project management methods.

Introduction

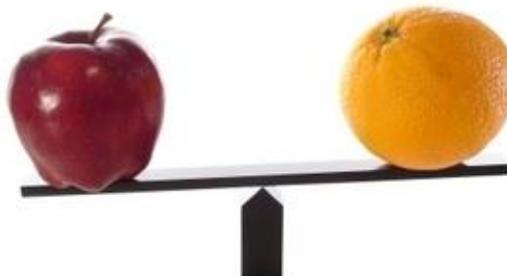
The US-based Project Management Institute (PMI) publishes the Project Management Body of Knowledge (PMBoK) [1], the most widely acknowledged assembly of the underlying principles of good project management in the world. The PMBoK presents a significant collection of project management knowledge in an accessible package. It is clearly an important element of a professional Project Manager's toolkit. The current fifth edition of the PMBoK was released in 2013.

The UK-based AXELOS Limited publishes the PRINCE2 method [2] which is the mandated or de facto standard project management method in the UK, many parts of Europe and increasingly in Australia and New Zealand. The number of people acquiring PRINCE2 qualifications continues to increase exponentially. The take-up of PRINCE2 in the USA, Canada, India and China has begun, with significant growth rates already in each country. PRINCE2 supports organisational needs for effective governance of projects. The current fifth edition was released in 2009.

PMI originally compiled its PMBoK in the late 1980s at a time when project failure rates were much higher than today, and it may have been felt that a 'project manager' skills problem needed to be addressed. The UK Association for Project Management (APM) first began developing its Body of Knowledge (APMBoK) around the same time and published the first edition in 1992. PRINCE was first published in 1989, being derived from an earlier method developed in the 1970s. PRINCE2 is the second version of PRINCE. It takes a more holistic view of project management; addressing project manager skills was seen as only one aspect of project management, hence the wider breadth of PRINCE2.

There is still a distinct polarisation of views in the project management profession in Australia as to which is the true way, the PMBoK or PRINCE2, as though these methods are mutually exclusive. Some organisations require their senior project managers to be PMP qualified; others mandate PRINCE2 Practitioner status. Most organisational project management methods are currently based on either the PMBoK or on PRINCE2. With the recent release of new versions of each method, there is an opportunity to compare them again, and reflect on their usefulness in the broader context in which project management occurs.

Method of comparison



This paper compares the two methods in nine ways:

1. Ownership of the intellectual property of each method;
2. A comparison of the authority attached to each method;
3. A comparison of the apparent philosophies underpinning each method;
4. A direct comparison of the major features of each method, where possible;
5. A comparison of the approaches each method takes to aspects of project management;
6. A comparison of the impact of each method on key stakeholders;
7. An assessment of the usefulness of each method to organisations;

8. An assessment of the recognition of formal accreditation to each method; and
9. A brief discussion of supporting materials.

Ownership of the methods

The US-based Project Management Institute owns the intellectual property and trademarks associated with the PMBoK. The Board of PMI are all PMP-certified professional project managers. The executive management team of PMI appear to be very highly experienced senior managers of large commercial organisations.

PRINCE2 was initially published by the Office of Government Commerce, an agency of UK Treasury. With the change in Government of the UK that occurred in 2010, a decision was made to begin commercialising the intellectual property that had been developed over the years by the public sector in the UK, including all of the products in the Best Management Practice suite such as PRINCE2. As a first step, ownership of the intellectual property was transferred from the OGC to the Cabinet Office, and steps were commenced to move to a more commercial basis. The UK Government established a joint venture on 1 July 2013 called AXELOS Limited, in partnership with a British business outsourcing firm; the UK Government retains 49% ownership of AXELOS. From 1 January 2014, ownership of the intellectual property in PRINCE2 was transferred to AXELOS. It is expected that AXELOS will very aggressively promote PRINCE2 worldwide.

Authority attached to each method

There are a number of terms used somewhat interchangeably when describing the PMBoK and PRINCE2 – ‘guide’, ‘method’, ‘framework’ and ‘standard’.

The PMBoK calls itself a ‘guide’ to project management, but this term could also be applied to PRINCE2. PRINCE2 calls itself a ‘method’, in the dictionary sense that a method describes an ‘established way of doing something’, and of course the PMBoK could also be described as a ‘method’ in this sense.

Both describe themselves as providing a ‘framework’ for project management. However, this appears to be a generic use of the term, not carrying the same weight as the competency assessment frameworks provided under either the Australian Quality Training Framework for project management, or the Australian Institute of Project Management’s (AIPM) Registered Project Manager (RegPM) framework.

The PMBoK carries the label ‘Global Standard’ on its cover, and describes itself as a ‘standard’, but defines this as meaning ‘a formal document describing established norms, methods, processes and practices’. The beauty about such ‘standards’ is that there are so many to choose from. In this paper, the word ‘standard’ is taken rather to mean a document issued by a national or international standards organisation such as Standards Australia or the International Standards Organisation. While Chapter 3 of the PMBoK does in fact form part of the American National Standards Institute’s project management standard, neither the PMBoK as a whole nor PRINCE2 is a ‘standard’ anywhere in the world. ISO 21500:2012 Guidance on Project Management is the

world's first global standard on project management; it contains elements derived from both the PMBoK and PRINCE2, and from other sources such as the APMBOK and MSP.

The authority of the PMBoK and PRINCE2 is reflected in other ways than mere terminology. Although reliable statistics are hard to find, it is estimated that by 2013, on a worldwide basis, the number of PMPs exceeded 600,000 and the number of people who have sat PRINCE2 exams exceeded 800,000. Currently, over 60,000 people per year sit the PRINCE2 Practitioner exam. In the UK, PRINCE2 certification is a prerequisite for over 60% of all project management roles advertised.

In Australia, something like 70% of the membership of PMI are IT project managers, and many of these people work in organisations which have a project management method based on PRINCE2. On the other hand, members of the AIPM seem to have no particular allegiance to either the PMBoK or PRINCE2, perhaps seeing the methods as equivalently useful tools of the trade, or as not relevant to their industry. There is a continuing trend for public sector organisations to prefer PRINCE2; The United Nations Development Programme adopted PRINCE2 worldwide in 2008, the governments in both Queensland and New Zealand adopted PRINCE2 in 2009, as did Canada in 2010.

Philosophy implied in each method

A deeper distinction between the PMBoK and PRINCE2 relates to the philosophies implicit in the methods. The PMBoK implies that 'project management' is the work of a project manager, whereas in PRINCE2, 'project management' is the process that organisations use to govern and deliver projects, and the project manager is but one of the important roles involved. Organisations aligned with the PMBoK might hold the project manager accountable for the success of a project. Under PRINCE2, the project manager is never accountable to the organisation for the success of a project, merely responsible to the Project Board; it is the Project Board in general, and the Executive in particular, who is held accountable for project success by the organisation as a whole. While professional project managers should have no problems in operating in a PRINCE2 environment, PRINCE2 does explicitly consider the need for additional support for 'accidental' project managers; again the distinction between those 'accountable' and those 'responsible' is critical, and the Project Board must be more proactive in supporting an 'accidental' project manager.

Another clear distinction between the PMBoK and PRINCE2 is accountability for the benefits promised in the project's Business Case. Many organisations hold the project manager accountable for these benefits; PRINCE2 recognises that this is generally counterintuitive; a project manager may have little organisational authority to enforce any structural or work practice changes that might be necessary prerequisites to benefits realisation. For this reason, PRINCE2 says that the Senior Users on the Project Board should specify the level of benefits to be realised from use of the project's products, and these Senior Users are held accountable for benefits by corporate and programme management.

PRINCE2 is explicitly principles-based. Its seven principles of project management have always been implicit in PRINCE2, but were made explicit in a new chapter in the 2009 version. Of note

is the principle that the project management method being used should be tailored to suit the needs of each specific project and its organisational context.

The PMBoK in one sense is a collection of tools and techniques. The focus on tools and techniques in the PMBoK implies that its target audience is professional project managers. The latest version of PRINCE2 extends its description of tools and techniques in areas such as estimating and risk management, although these techniques are not currently examinable. The target audience of PRINCE2 includes not only project managers (who are not presumed to be professional project managers) but also those involved in governing projects, supporting projects and doing the work within project teams.

There are also other distinctions between PRINCE2 and the PMBoK.

The PMBoK and PRINCE2 both recognise that they are not complete, and provide pointers to additional guidance. The PMBoK says that the project manager must understand and comply with organisational process assets, which of course could include an organisational project management method based on PRINCE2. Conversely, PRINCE2 has always said that its focus is on project management processes, not specific tools and techniques. PRINCE2 goes further by saying that if a project manager needs to use a tool or technique not covered by PRINCE2, or inadequately covered by it, the project manager should seek out more detailed information from sources such as the various project management bodies of knowledge, including the PMBoK or the APMBOK.

Another major distinction between PRINCE2 and the PMBoK is that PRINCE2 has always provided detailed advice and guidance to those charged with governing projects. The new version of the PMBoK introduced the word 'governance' for the first time. The word is used around 40 times in the PMBoK. Around 20 of these references relate to the need for each project to be aware of its corporate governance environment. The remaining references describe project governance in a generic sense. Organisations using only the PMBoK would need to develop additional induction and support materials to assist those governing projects. The latest version of PRINCE2 now provides a separate manual [4] targeted at those governing projects, which also discusses various principles of project governance. While it is still necessary to provide induction and support to those governing projects, the content of these briefings and the principles underpinning ongoing support are explicitly provided by PRINCE2. Many organisations using the PMBoK approach to project management, use 'steering committees' as the mechanism of governance. The 'steering committee' role is not mentioned in the PMBoK; it is apparently a construct invented by organisations to fill a critical gap. Because governance in general, and the 'steering committee' role in particular, are not defined in the PMBoK, these concepts have never been subjected to critical review and continual improvement as the PMBoK is refreshed, unlike PRINCE2's guidance on governance.

Another deep distinction between the methods has to do with the timing of realisation of benefits. The PMBoK assumes that benefits will be realised through the use of a project's deliverables before the project is completed. There will be a review at the end of each projects which will cover both the conduct of the project and benefits realisation, even though for most projects, the full quantum of benefits expected cannot be measured until well after the project has finished. PRINCE2 on the other hand says that the role of a project is to deliver products into an

operational environment, and that many of the benefits of a project may not be realised in operational areas until some time after project closure, so that benefits realisation is generally outside the scope of the project. PRINCE2 also says that a project manager in general will not have the organisational authority to force any necessary changes in operational areas that may be required to realise benefits. This is why PRINCE2 says that one of the roles of the Senior User(s) on the Project Board is to ensure that such changes happen. This level of pragmatism is missing from the PMBoK.

Comparison of key features

Enterprise environmental factors

Both the PMBoK and PRINCE2 identify organisational culture, and the portfolio context in which a particular project is to be commissioned, as critical factors to be examined and understood. The PMBoK says that knowledge of the available human resources pool and individual's availabilities will be important. PRINCE2 considers these factors within its process model, when the project management team is being designed, and when resources need to be assigned to specific tasks during detailed planning, but also recognises that projects commissioned in a programme environment are likely to be better supported in terms of proactive oversight and established procedures for such things as risk management and quality management.

Organisational process assets

Both the PMBoK and PRINCE2 identify a range of organisational process assets that can be used by the project manager, including corporate processes and lessons learned from previous projects. The PMBoK generally regards procurement and contract administration as being aspects of project management, so corporate procedures regarding these processes are highlighted here. PRINCE2 regards these activities as specialist rather than project management activities, and so doesn't provide any guidance in these areas. In reality, most large organisations, particularly in the public sector, have standard procurement processes which would have priority over anything the PMBoK may provide. So the PRINCE2 approach simply reflects its origin in the public sector.

Knowledge areas

The PMBoK provides nine 'knowledge areas'; PRINCE2 provides seven 'themes'. These features provide the knowledge that is to be applied during all or most of each method's process models. There are major overlaps, and several differences. Both methods recognise risk as a major knowledge area. The PMBoK provides more support than PRINCE2 in the area of risk, but in Australia most organisations will conform to ISO 31000 rather than either the PMBoK or PRINCE2 in any case. PRINCE2's approach to risk is derived from the Management of Risk [16] guidance, a separate product that is far more detailed than the PMBoK's knowledge area.

Both methods recognise that the core project performance criteria are related, and can be traded off against each other if needed, but they approach this in different ways. The PMBoK recognises scope, schedule, cost and quality as the key parameters; each is recognised as a knowledge area by the PMBoK. PRINCE2 now recognises scope, schedule, cost, quality, risk

and benefits as the key project performance parameters; each is dealt with under one or more of the themes, such as planning and change control.

The PMBoK knowledge area on integration management deals with integration of all aspects of project management. In PRINCE2, this aspect of integration is covered somewhat by the workflow through the Start-up, Initiation and Planning processes, and by the change and progress themes.

The PMBoK has a knowledge area focussed on the human resource aspects of project management, and another knowledge area dealing with project communications. PRINCE2 has a theme called 'Organisation' that addresses both these aspects; PRINCE2 now provides significant support (drawn from the Managing Successful Programmes (MSP) [3] programme management method) for stakeholder engagement and communications.

The PMBoK has a knowledge area on procurement, which has no equivalent in PRINCE2, although the Work Package product and the processes associated significantly overlap with the procurement knowledge area. This may simply reflect the different heritages of the methods. The PMBoK essentially arose in the private sector, and it may have seemed necessary to have the method provide guidance on procurement. PRINCE2, having a public sector heritage' saw no need to cover something that was described in detail in public sector procurement policies and procedures. It must be said, moreover, that the PMBoK coverage of procurement is simplistic and outmoded; it could not be used in a public sector environment in which more advanced modes of procurement, such as outsourcing or Public Private Partnerships are very common.

PRINCE2 recognises the Business Case as a theme. In the PRINCE2 approach, the Business Case provides the primary control mechanism available to those governing the project, and is to be updated with actual costs to date and better forward estimates of future costs and benefits at the end of each management stage, just as both methods say that the Project Management Plan or PID should be similarly updated.

PRINCE2 provides significant support for Configuration Management in the Change theme. This may be historical; perhaps the public sector organisations that were its first clients didn't have corporate configuration management procedures, and the PRINCE2 authors thought that they needed one.

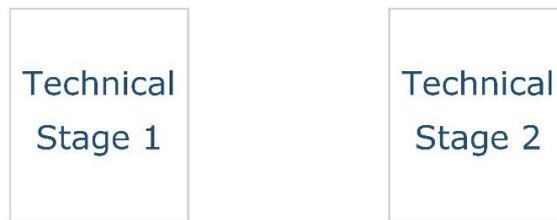
Finally, PRINCE2 has a theme called Progress, which includes a description of project controls. These are predominantly controls that those governing the project can utilise. Almost every artefact in the PRINCE2 approach can be thought of as a control, such as team reports to the project manager and project reports from the project manager to corporate or program management (roughly equivalent to the 'sponsor' in the PMBoK). The novel control features of PRINCE2 include the Project Board, with defined roles and responsibilities for each of its types of member, other controls to support management by exception by the Project Board such as the concept of tolerance around budgets for schedule, cost, risk, quality and so on, and an exception process to deal with breaches of tolerance. Other control features embedded in the PRINCE2 approach are the linked concepts of management stages, planning horizons and stepwise refinement through an hierarchy of plans.

Process groups

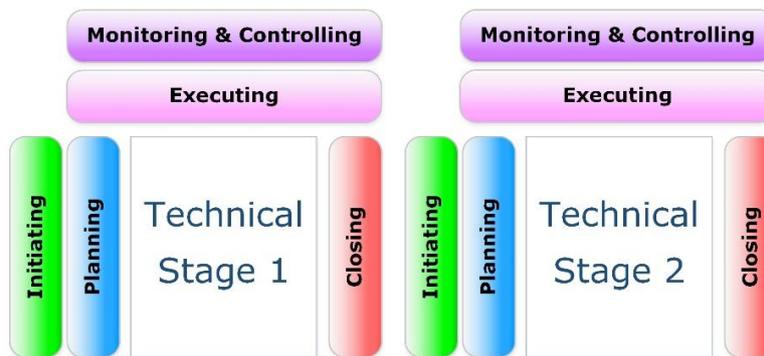
The PMBoK identifies five process groups; PRINCE2 has seven main processes.

Both methods say that there may be natural phases associated with specific types of projects such as IT or building construction, and that the handoff between phases is at the discretion of the project manager. Both recognise that phases may overlap.

To illustrate the differences between the PMBoK and PRINCE2, consider a project which will have two technical phases.

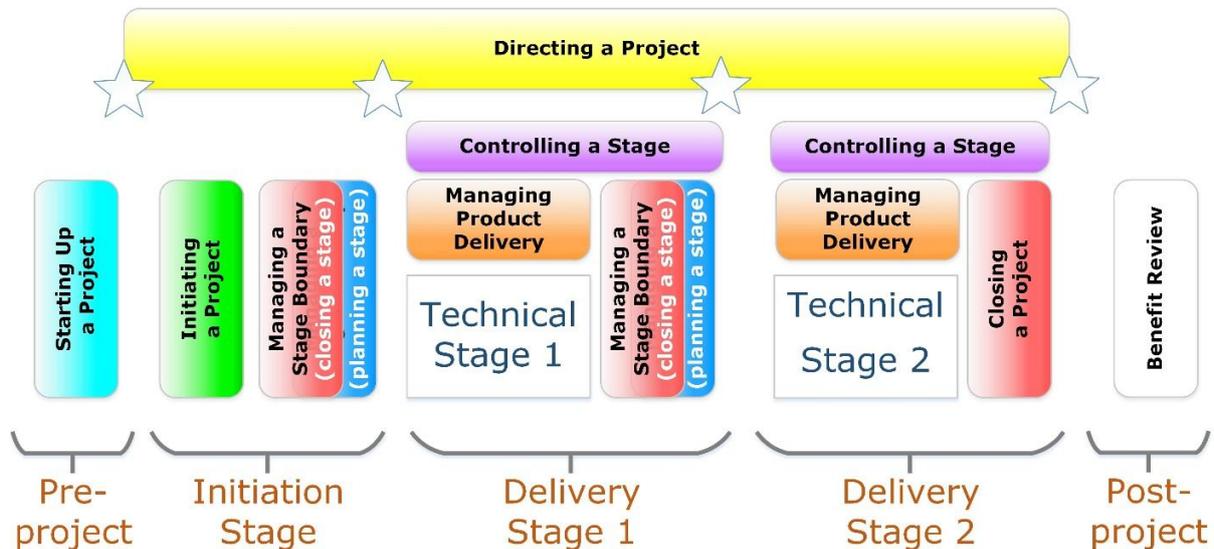


The PMBoK process groups are generally applied to every phase of a project, as illustrated in the following diagram:



The Initiating process group defines a new project, or a new phase of a project, then obtains authorisation to start the project or phase. The Planning process group establishes the scope of the project, refines its objectives, and defines the actions required to attain these objectives. The Executing process group completes the work defined in the Project management Plan to satisfy project specifications. The Monitoring and Controlling process group tracks. Reviews and regulates the progress and performance of the project, and identifies and initiates any changes required. The Closing process group performs all activities across all process groups to close a phase or the project.

In contrast, using the PRINCE2 processes is a little more complex:



The PRINCE2 process of *Starting Up a Project* is a set of pre-project activities which check that the proposed project makes enough sense to justify a project. The first stage in every PRINCE2 project is the Initiation stage, in which the *Initiating a Project* process covers high level delivery planning, and the *Managing a Stage Boundary* process produces the stage plan for the first delivery stage. The processes of *Controlling a Stage* and *Managing Product Delivery* apply to every delivery stage of a project, the former specifies the Project Manager's day-to-day activities, and the latter describes the interface between the Project Manager and each Team manager. At the end of every delivery stage except the final stage, the *Managing a Stage Boundary* process is run; it first checks that the current stage will finish as planned, then plans the next delivery stage. These processes are then repeated in each delivery stage. The *Closing a Project* process is invoked in the final delivery stage of a project. The *Directing a Project* process has no equivalent in the PMBoK; it describes the work of the Project Board over the life of the project, and its key decisions at the end of every stage. PRINCE2 also explicitly separate the review of the conduct of the project performed in the *Closing a Project* process, from the Benefit Reviews that will generally occur well after the project has closed.

The value of the PRINCE2 approach was vividly highlighted in research conducted in 2010 [15], based on a global survey of project managers. These project managers were split into two groups: those who used PRINCE2, and those who used some 'other' method (such as the PMBoK). One of the most striking findings of this research was that none of the PRINCE2 project managers expressed serious concerns about the scope of their projects, whereas almost all of the 'other' group said that uncertainty about their projects' scope resulted in problems. It can be seen that using PRINCE2, the pre-project process of *Starting Up a Project*, and the Initiation Stage as a whole, both serve in part to eliminate uncertainty and gain consensus about project scope, and to terminate poorly conceived ideas, before the project moves on to its delivery stages. This 'self-insurance' is absent in the PMBoK approach.

Both methods say that the 'sponsor' may need to make a management decision as part of the transition between certain phases. In PRINCE2, these management decisions are formally recognised as constituting a boundary marking the end of one 'management stage' and the beginning of the next. Management stages may not overlap, although specialist phases may span stage boundaries.

Techniques

The PMBoK has always been more supportive in terms of techniques, such as quantitative risk analysis and earned value management. PRINCE2 has now moved towards the PMBoK in the sense that it provides detail on more techniques than just the three provided by the previous version: product-based planning, change control, and quality review. In both methods, the techniques are embedded in the knowledge areas. In the PMBoK, there is no equivalent to PRINCE2's product-based planning technique, which puts a product-based front-end to the traditional activity-based approach to planning. Product-based planning is a mandatory feature of PRINCE2, and aligns with the PRINCE2 principle that a project should remain focussed on the products it has been commissioned to deliver.

Roles and Responsibilities

The PMBoK identifies three main roles: the project manager, the sponsor and the PMO. The project manager's role is specified in great detail in the knowledge areas and in the process model, the PMO's in an abbreviated manner and the sponsor's only in a cursory manner.

It is a principle of PRINCE2 that there should be clarity of roles and responsibilities. PRINCE2 identifies four main roles, and several optional roles. The main roles are the Project Executive, supported on the Project Board by Senior User(s) and Senior Supplier(s), and the project manager. The responsibilities of these main roles are specified in detailed role descriptions, and are elaborated at relevant points in the process model. Other roles include assurance roles supporting the Project Board, project support (a project office function), team managers, and an optional change authority.

In the PMBoK, the sponsor's role is essentially unconstrained. In PRINCE2 however, the Executive must act within the constraints set by corporate or programme management.

In smaller PRINCE2 projects, the sponsor will be the project's Executive. In practice, for larger projects, the author has found it useful to introduce the sponsor role, as being a figurehead much higher in the organisational hierarchy than the person in the Executive role.

Key project management products

The PMBoK recognises three major project management products:

- the Project Scope Statement;
- the Project Charter; and
- the Project Management Plan.

In PRINCE2, the equivalents to these products are:

- the Project Product Description;
- the Project Brief which includes an outline Business Case; and
- the Project Initiation Document (PID), which includes a summary Project Plan, a detailed Business Case and a description of the project's control framework.

These three corresponding pairs of documents have similarities and differences in intent and content.

The Project Scope Statement lays out the key deliverables of the project, and their acceptance criteria. In PRINCE2, these elements are described in the Project Product Description.

The Project Charter is a high-level description of the project and its justification; interestingly, this statement does not describe any benefits that the project will contribute to the organisation. The PMBoK states that the Project Charter, when approved, formally authorises the project manager to expend organisational resources. In PRINCE2, the Project Brief contains a high-level analysis of alternative approaches the project could take to produce its deliverables, as well as a list of the project's key benefits and an outline Business Case. The Project Brief, when approved by the Project Board, authorises the project manager to commence the Initiation Stage, only.

The Project Management Plan is a detailed plan and control framework covering the entire life of the project. In PRINCE2, the PID is a document which includes the high-level Project Plan, a detailed Business Case, and the project's control framework. Approval of the PID does not provide authority to the project manager to commence any delivery stage.

In addition, PRINCE2 recognises three more major products:

- the Business Case;
- the Benefits Review Plan; and
- Stage Plan(s).

The Business Case is one of the major differentiators between the methods, and it arises because of PRINCE2's support of project governance. In the PMBoK, the only reference to the Business Case is as an element of the Project Charter; the PMBoK states that "Business Case assessment, approval and funding are handled externally to the project boundaries". In PRINCE2, the Business Case, created in outline as part of the Project Brief, refined in the Initiation Stage as part of the PID, and updated at the end of each management stage with actuals to date and better estimates to the end of the project, better estimates of benefits expected, and a review of the risk position, provides the Project Board with the information it requires to agree to start the project and later to permit the project to continue past each stage boundary. The updated Business Case supports a decision by a functioning Project Board to terminate as early as possible a troubled project that is unsalvageable, in order to conserve organisational resources for more productive uses. In PRINCE2, the Business Case survives the end of the project; once benefits realised have been measured, the Business Case is updated and checked again to ensure that the organisation has received full value from the project. This again demonstrates that PRINCE2 is more than just a method to control development of deliverables.

The Benefits Review Plan is also a major differentiator between the methods; it specifies when and how the realisation of benefits will be confirmed, both before and after the project has finished. The Benefits Review Plan supports the PRINCE2 principle that projects are commissioned to deliver benefits. The Senior User(s) are held accountable for realisation of benefits in their operational areas.

Finally, in recognition of the PRINCE2 principle *Manage by Stages*, a stage of a PRINCE2 project can only be commenced when the Project Board has approved its Stage Plan. A Stage Plan is written to the same level of detail as would be expected in a PMBoK Project Plan, but its scope is restricted to just one stage. This approach recognises the concept of a planning horizon, beyond which the level of uncertainty about the completeness or accuracy of requirements, and the stability of resource allocation, among other factors, means that it makes little sense to plan in detail too far in advance. PRINCE2 uses a rolling wave, or just in time, approach to detailed planning.

Approaches to daily challenges

Project Manager's authority

In the PMBoK, the Project Charter provides the project manager with authority to expend organisational resources, to the end of the project. While the PMBoK recognises that a project may be prematurely terminated, it is silent on the way in which this can formally occur.

In PRINCE2, the project manager's authority derives from the Project Executive. The project board delegates to the project manager the authority to execute a Stage Plan. This authority expires in two ways: normally and abnormally. The project manager's authority to execute a project expires normally at a management stage boundary; this authority must be formally renewed by authorisation of the next stage plan. The project manager's authority to continue executing the project expires abnormally whenever a project or stage breaches its allocated tolerances. In both of these cases, the project manager must convince the project board that the project remains on track, or can be brought back on track, before further work is performed. The project manager acts on behalf of the project board; the Project Board is ultimately accountable for the project's success or failure.

Planning

PRINCE2 uses an output-based or product-based approach to planning. Planning starts by specifying the major deliverables required in a Project Product Description, then proceeds by iteratively identifying and specifying other products that will have to be developed on the way. Once this process has finished, the activities required to develop those products are identified. Thereafter, the formal approach is essentially identical to that prescribed by the PMBoK. While the PMBoK does say that planning could start with the required products, it does not provide any support for this approach. Of course, the PMBoK provides much more detail on the later aspects of planning, although the latest version of PRINCE2 is much more supportive in terms of describing useful estimating techniques.

PRINCE2 recognises a hierarchy of plans, providing increasing levels of detail and reflecting the needs of different levels of management. The Project Plan will be at a high level of detail, and will meet the needs of those governing the project. A Stage Plan will be at whatever level of granularity is required for effective control of that stage by the project manager. A Stage Plan may consist of one or more Team Plans, where a Team Plan provides for effective control of a team's work by a team manager. There is no hierarchy of plans in the PMBoK, because the method doesn't recognise that the needs of those in governance roles or team managers may be different to those of the project manager.

Planning Horizons

Both methods have the concept of a planning horizon.

In the PMBoK, a WBS is created to cover the entire project. As the project progresses, the WBS will be reviewed and revised as necessary. The PMBoK does say however that it may be that the level of detail in distant aspects of a plan might initially be at a summary level, to be elaborated as the project progresses.

In PRINCE2 the planning horizon is usually set at around three months or so, beyond which the uncertainties of the future means that the value of detailed planning decreases below the cost of developing the plan. There is nothing stopping a project manager developing a detailed plan to the end of the project for budgeting purposes, however PRINCE2 takes the pragmatic view that in projects of long duration, the later elements of such a detailed plan will likely need to be reworked or replaced several times by the time they are needed.

Phasing

The PMBoK concept of 'phase' and the PRINCE2 concept of 'management stage' are not equivalent concepts. The former relates to technical control by the project manager. The latter relates to governance control by the Project Board.

Under the PMBoK, a project is decomposed into phases to provide better management control of the project. A phase is not synonymous with any of the process groups. All process groups may be applied in each phase. Initiating processes are carried out at the start of subsequent phases to validate decisions made during the original Project Charter and Scope processes. A 'phase end review' can be held. Phases may overlap, as part of a schedule compression technique.

In PRINCE2, a management stage represents a body of work large enough to be meaningful yet small enough that the Project Board remains in control. The Project Board reviews the project at the end of each stage, and makes a conscious decision to continue the project. The work within the stage may be decomposed into technical phases, at the discretion of the project manager, to support better technical control. Progression from one technical phase to the next is at the discretion of the project manager, and such phases may overlap. The management stage concept can then be seen as a PRINCE2 governance control superimposed on top of what are essentially identical to the phases referred to in the PMBoK.

Requirements

Under the PMBoK, project requirements would be gathered in an early phase of the project. The project manager would be held accountable if the requirements proved to be incomplete or incorrect. Under PRINCE2, project requirements are provided at an abstract level in the Project Product Description, which lists the key products to be delivered by the project and associated customer quality expectations and acceptance criteria. The Project Product Description is progressively elaborated in more detailed Product Descriptions for each of the key products, specifying functional, performance and quality requirements. Senior Users are held accountable for the correctness and completeness of the Project Product Description and Product Descriptions.

Benefits

PRINCE2 provides significant guidance on benefits, in the principles, themes, processes, and roles, whereas the PMBoK is silent on benefits. This is a critical differentiator between the methods, that reflects the PMBoK view that the Business Case (and its cost-benefit analysis) is only relevant outside the project.

The PMBoK will have to address this aspect of project performance if it is to become relevant as the basis of an organisational project management method, although the guidance on benefits in PMI's programme management offering is a useful step in the right direction. It could be that the PMBoK will need a new Knowledge Area focussed on benefits.

Stakeholder Engagement

PRINCE2 has moved beyond just communication as a means of stakeholder engagement. Significant guidance in the area of stakeholder analysis and engagement has been drawn down from MSP, to greatly strengthen PRINCE2 in one of its previous areas of weakness. The PMBoK guidance in this area is now relatively weaker than that offered by PRINCE2.

Quality

PRINCE2 provides significant guidance on quality, both quality assurance and quality control. Product quality in PRINCE2 is dependent on the quality criteria specified in Product Descriptions. Quality review of a product is always against these agreed quality criteria, which tends to make quality reviews less subjective. PRINCE2's structured quality review technique increases the effectiveness and efficiency of quality review activities. The PMBoK remains relatively weak in this area.

Volatility of key project management documents

The PMBoK states that several of the Process Groups (Planning, Executing, and Monitoring and Control) may update the Project Management Plan as the project progresses. The Project Charter, which includes the Business Case, may be reviewed and updated at the end of each phase.

PRINCE2 states that the Project Plan and the Business Case must be updated minimally at the end of each management stage with actual costs to date, and better estimates for future costs and benefits, and will also be updated at the end of the project with actual costs and better estimates

of benefits, and will also be updated with the value of benefits realised by the time of a post-project benefits review. Why? Because corporate or program management will hold the Project Board members accountable for delivery of the commitments outlined in the Business Case, the Executive and Senior Supplier for costs incurred and the Senior User for benefits realised.

Principles

The collection and elevation of the seven principles of PRINCE2 provides support to project managers who find themselves having to deal with a situation not covered by knowledge areas, processes or roles. PRINCE2 explicitly states that it is unlikely to contain guidance suitable for every eventuality. In such cases, PRINCE2 pragmatically advises the project management team to devise a suitable solution, but then check that the solution is aligned with the principles. There is no equivalent support in the PMBoK.

Scaling up and down

Both methods state that the method should be scaled to suit the needs of the particular project. Not only is this now a principle of PRINCE2, there is an appendix in the PRINCE2 manual offering specific advice in many areas on scaling, such as Project Board structure, staging and planning.

Impact on stakeholders

Project Governance Support

The PMBoK defines a 'sponsor' as the person providing the project's funding. Other roles include specification of acceptance criteria and formal acceptance of deliverables. The sponsor may specify the frequency of project review meetings. Otherwise, the PMBoK appears silent in the area of governance, which reflects its historical background, and offers the sponsor no supporting guidance. The guidance on governance presented in PMI's programme management offering is a useful step in the right direction. The PMBoK will have to address project governance if it is to become relevant as the basis of an organisational project management method.

Interestingly, most organisations that use the PMBoK approach to project management, use a 'steering committee' to provide project governance. The PMBoK does not contain the phrase 'steering committee'. It would seem that organisations that use the PMBoK have recognised the lack of guidance on project governance, and have created the 'steering committee' to fill the gap; there is no formal methodological support for 'steering committees', meaning that the concept has never been exposed to challenge and continual improvement in the same way as the rest of the PMBoK.

PRINCE2 is much more prescriptive about project governance. As might be expected, since the 'C' in PRINCE2 stands for 'Controlled', the method provides a wide range of controls to those tasked with governing projects. There is now a specific manual focussed on governance [4], although the base PRINCE2 manual also describes project governance.

In PRINCE2, a Project Board consists of a Project Executive representing the interests of the business funding the project, one or more Senior Suppliers representing the interests of those who

will be creating the project's specialist products, and one or more Senior Users representing the interests of those who must take the products delivered by the suppliers and deliver benefits to the organisation. The roles and responsibilities of each are well specified. The Project Board's authority derives from corporate or program management, and terminates when the Project Board agrees that the project has been completed or is no longer viable. PRINCE2 does not require the Project Board to formally meet; for smaller projects and where otherwise not though useful, Project Board decisions can be made offline or informally. Rather, PRINCE2 describes several key Project Board decision points. There is a Project Board decision to approve the Project Brief and authorise initiation of the project. There is a Project Board decision to approve the Business Case, Project Plan and authorise commencement of the first delivery stage. There is a Project Board decision at the end of each stage, to authorise continuation of the project into the next stage. Finally, there is a Project Board decision to authorise closure of the project. It is up to the Project Board to determine the level of formality it wishes to apply to each of these decisions.

PRINCE2 also identifies an optional Project Assurance function, supporting the Project Board by investigating, reviewing or auditing some aspect of the project and providing advice independent of the project manager. Further, a Project Board faced with a complex situation could in practice engage one or more people or organisations through the Project Assurance function to deal with the detail and provide a brief to the Project Board. This would occur in most organisations; it's simply formalised in the PRINCE2 method.

PRINCE2 identifies a Change Authority role or function, whereby the Project Board may delegate some of its authority to approve change requests to other roles including the project manager, or which may appear as a Change Control Board or equivalent.

Other controls available to the Project Board include:

- the ability to provide the project manager with ad hoc advice and direction
- setting of stage boundaries, which establish fire-breaks for reassessment of the project's ongoing viability and terminate runaway projects
- End Stage reviews, where progress to date and projects to the end of the project can be reviewed to ensure the ongoing viability of the project
- End Project reviews, after which the Project Board may decide to close the project, if they are convinced that the project's work has been satisfactorily completed. The project manager cannot summarily close a project
- at the end of the project, any open issues and risks, outstanding activities, product defects and any other follow-on actions are passed from the project manager to relevant operational managers for ongoing action
- setting of tolerances, giving the project manager some freedom to move around schedule or budget, while ensuring the Project Board remains in control through mandatory notification of the Project Board if a tolerance is breached
- the content and frequency of status reports, and whether a formal Project Board meeting is needed to review each status report.

Most PRINCE2 training organisations provide training in the method itself to project managers, to some of whom the governance aspects may appear as a burden. Most training organisations also provide briefings on the governance aspects of the method to senior executives, although many organisations do not take up these offerings. The full benefit of PRINCE2 to organisations cannot be realised if Project Board members do not understand their governance responsibilities, do not understand how to use the controls that PRINCE2 makes available to them, or cannot operate effectively within the method.

Project Manager Support

The purpose of the PMBoK is to support project managers. The PMBoK knowledge areas provide much more detail in more areas than is generally provided by the PRINCE2 themes, although PRINCE2 now provides much more supporting detail in many of its themes. Nevertheless, PRINCE2 provides several novel mechanisms that support the project manager, including:

- The approach to step-wise refinement of plans means that a project manager does not need to create detailed plans too far into the future, with the real prospect that they will have to be rewritten closer to the time they will be needed, although this approach is described in the PMBoK. A Project Plan represents a high-level overview, a Stage Plan provides whatever level of detail the project manager or project board is comfortable with before work on that Stage commences;
- The product-based planning technique, which provides a principled front-end to WBS-based planning, particularly useful in novel domains and which supports a number of product-based controls, which make PRINCE2 very easily integrated into an earned-value management regime;
- The 'golden thread' supporting quality represented by Customer Quality Expectations and associated Acceptance Criteria, the Project Quality Plan, Product Descriptions and Work Packages, the Quality Review Technique and the quality-related aspects of the issue management procedure, product approval, and final Customer Acceptance of deliverables;
- The Work Package concept, which essentially becomes a formal contract or tasking mechanism between the project manager and those who will be developing the specialist products identified in the Work Package, and places the onus on project team leaders to obtain client acceptance of products delivered;
- Project status reports, which provide a mechanism for project managers to formally escalate risks and issues to the Project Board;
- Team checkpoint reports, product checklists and quality logs which enable the project manager to keep project teams under control.

Project Team Support

The PMBoK is silent about the needs of project team members. Its focus is on how a project manager can manage a project team, and it seems to imply that the project manager acquires the services of others through procurement and contract administration. The procurement knowledge area provides the project manager with the necessary guidance.

In PRINCE2, Work Packages must be negotiated between project managers and project team leaders or the person who will be doing the work, before the work starts. The method, if applied, helps to prevent situations arising where teams must deliver products within unachievable timeframes or budgets. If their Work Packages are large enough, the project team may need to develop a Team Plan to increase certainty around estimates and risks, and provide role clarity. Checkpoint reports provide mechanisms for project teams to formally escalate unresolved issues to the project manager. Since a Work Package could take the form of a contract with an external third party, there is an obvious overlap between PRINCE2's Work Packages and the PMBoK's procurement knowledge area.

Project Support

Both the PMBoK and PRINCE2 recognise the value of a project support function. The PMBoK refers to this as a project management office (PMO), and states that a PMO will probably be supporting multiple projects. PRINCE2 uses the term Project Support, for the role that provides administrative and other support to the project manager. Both methods provide a description of the role of this function in a project environment.

The Portfolio, Programme and Project Office (P3O) [6] guidance provides detailed advice on justifying, establishing, operating and reinvigorating support functions at the three levels of portfolio, programme and project. PRINCE2 and MSP now defer to P3O for detail on project support functions.

Usefulness to organisations

The PMBoK is targeted at professional project managers; it does not address the needs of those in project governance roles. While improving the competence of individual project managers is worthwhile, successful projects are generally a team effort, requiring effective input and action from corporate and programme management, those in project governance roles, support offices, and those managing project teams. In this sense, PRINCE2 is of far greater use to organisations, because it provides guidance to those in governance roles (now through an additional manual focussed specifically on their needs), those in team management roles, and those in project support roles.

It seems that only a fraction of practicing project management professionals worldwide subscribe to either the PMBoK or PRINCE2. As well, a significant proportion of project managers are likely to be 'accidental' or part-time, and would view the PMBoK as a serious overkill. In the author's experience of training accidental project managers working in such areas as front-line healthcare, machinery workshops, and public administration roles, PRINCE2 is a steep learning curve but achievable because it reflects these people's everyday experience, provides approaches to common problems they experience, indicates the support they should expect to receive from others involved in the project, and hence is seen as more useful by them.

Recognition of formal accreditation

There is a formal accreditation scheme associated with the PMBoK, culminating in recognition as a Project Management Professional (PMP). A PMP applicant is required to provide evidence of

their experience as a project manager, by way of a CV, which the PMI says is checked randomly. Anecdotal evidence suggests that this evidence is rarely checked. PRINCE2 has an entry level Foundation certification, and a higher level Practitioner certification. Both of these certifications require candidates to successfully complete a formal examination of their understanding of the corresponding method. So it seems that neither the PMP accreditation, nor the PRINCE2 certifications, are competency assessments.

In Australia, there are two main competency-based accreditations, both of which are primarily based on the PMBoK. The Australian Quality Training Framework supports tertiary-level Certificate IV, Diploma and Advanced Diploma awards. The Australian Institute of Project Management has developed its Registered Project Manager (RegPM) scheme, culminating in recognition as a Certified Practising Project Director. The latter is essentially equivalent to an Advanced Diploma in project management. Both of these accreditations require the candidate to produce documentary evidence of their experience as a project manager, and this evidence is thoroughly checked. An experienced project manager, who can present evidence of having successfully managed a number of projects to completion under a PRINCE2 framework, but who has had no formal exposure to the PMBoK, should nevertheless have no difficulty in achieving one or both of these competency-based accreditations.

Supporting materials

PRINCE2 is supported by a range of other products in the Best Management Practice suite. MSP [3] is a programme management method, which works very well with PRINCE2 through role and process integration. There are many elements of MSP that can be brought down to project level to augment PRINCE2 for large or complex projects. The Management of Risk guidance was released in 2010, and provides guidance on risk management at project, programme, portfolio and operational perspectives. The Management of Portfolios guidance [12] was released in 2012. The Portfolio Programme and Project Office guidance was refreshed in 2013. P3O describes a potential hierarchy of support functions; there is no equivalent offering from PMI.

The PMBoK is also supported by other core offerings from PMI at the programme [13] and portfolio management [14] levels. Care needs to be taken, though, because the word 'programme' used in the PMI world is not equivalent to the word 'programme' used in the Best Management Practice suite. PMI seem to mean by programme a large project broken up into smaller projects, whereas the Best Management Practice products mean a set of interrelated projects and other initiatives that together enable outcomes of strategic importance to an organisation. In the terminology developed by the Global Alliance for Project Performance Standards [11], the PMI meaning best aligns with 'very large project' and the Best Management Practice meaning with 'strategic programme'. The PMI offering in the programme management space is best seen as an extension of the PMBoK that would flesh it out and move the PMBoK closer to PRINCE2 in the areas of governance and benefits focus. By contract, MSP is a robust method that treats programme management as a management practice distinct from project management.

The UK Office of Government Commerce (OGC) have published a Programme and Project Sponsor (PPS) [7] offering to augment the guidance on governance contained in PRINCE2 and MSP. There is no equivalent offering from PMI.

OGC have published the Gateway Review Process [8], intended to provide assurance to those in governance roles about the effective establishment and progress of programmes and projects. There is no equivalent offering from PMI.

Both OGC and PMI have released maturity models which organisations can use to assess their current maturity and way forward – the Portfolio Programme and Project Management Maturity Model (P3M3) [9] from OGC and Organisational Project Management Maturity Model (OPM3) [10] from PMI.

PMI have released extensions to the PMBoK focussed on specific domains such as construction and government. There are no equivalent offerings from AXELOS.

PMI have released practice standards in such areas as configuration management, estimating and scheduling. There are no equivalent offerings from AXELOS.

Coexistence of the methods

The PMBoK identifies a number of Organisational Process Assets that may be available to the project manager, one of which is an organisational project management method (PMM). One of the facets of an organisational PMM is a specification of the governance controls that the organisation expects to be utilised for projects. In many organisations, these governance controls are custom-built in-house. However, as the ‘C’ in PRINCE2 stands for ‘Controlled’, it begs the question: what if the governance controls in the organisational PMM were derived from PRINCE2, and mandated such things as a Project Board with defined roles and responsibilities rather than a loosely-defined ‘sponsor’, management by exception supported by tolerances and a formal exception process rather than weekly meetings, update and review of the Business Case at the end of each phase rather than a Business Case which is a funding request not used thereafter, Product Based Planning as a front-end to the usual activity-based planning, the use of Work Packages to control the work of project team members, and the use of the PRINCE2 process model including mandatory Project Board approval before progression from one management stage to the next. Could a PMP-qualified Project Manager cope? Clearly, the answer is ‘very well’, given the significant overlaps we’ve already discussed.

If an enterprise portfolio or program management function, such as a programme management office (PMO), commissioned a project and wished to hand it off to a professional project manager to execute, part of the selection process in many organisations is a matching between the nature and demands of the proposed project and the competency and experience of the various candidates. For example, the Defence Materiel Organisation (DMO) introduced its Acquisition Category framework in 2004 to relate the characteristics of projects to the competency of project managers thought able to manage such projects.

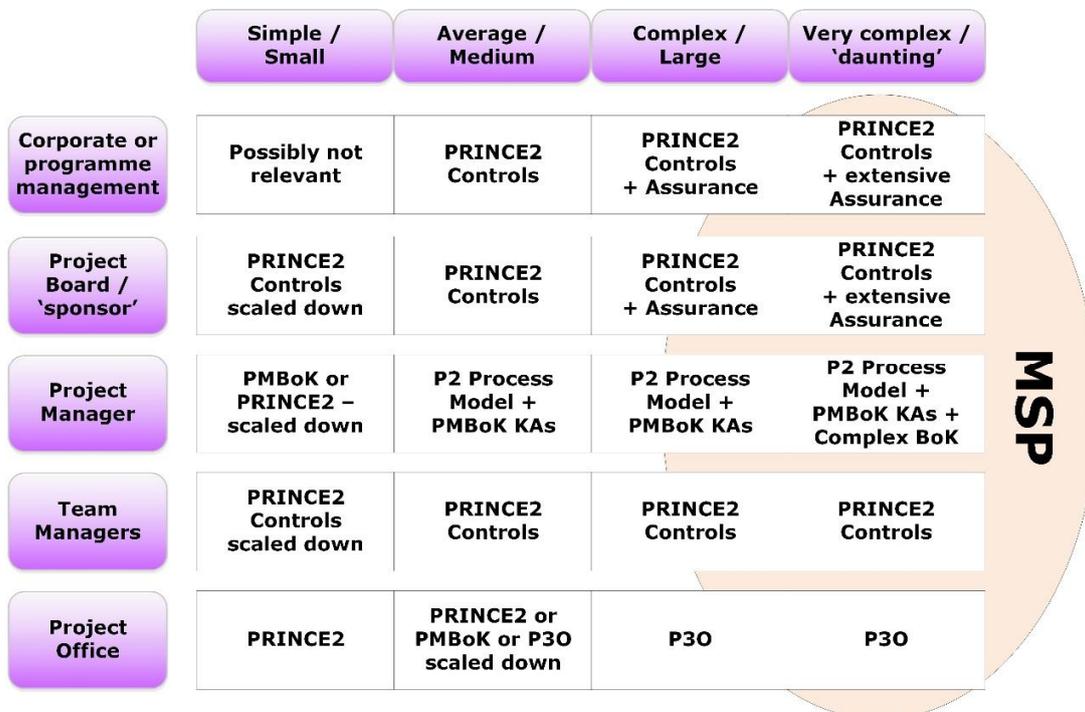
Other organisations use other means to size projects and identify suitably qualified or competent project managers. A small, low risk project might be handed to someone who’s been on a PMBoK-based course or read the PRINCE2 manual. A larger, riskier project might need someone with more tools in their kit bag, as demonstrated by their having a PMP or a PRINCE2 Practitioner qualification. An even larger, very risky project (described as a ‘daunting’ project by PRINCE2) might need someone with one or both of those qualifications, as well as demonstrated

competency in project management. This thought process is the basis of the Australian Defence Materiel Organisation’s Project Management Certification Framework introduced in 2006, which requires its project managers to gain formal accreditations (Certificates, Diplomas and Advanced Diplomas), which in Australia are primarily based on the PMBoK and require proof of the candidate’s ability to apply their knowledge. And for a highly complex, extremely risky project? The DMO obviously feels that even more is required, hence the development and release of its Competency Standard for Complex Project Managers [5], which identifies further knowledge areas beyond the PMBoK. The MSP program management method is also emerging as a critical tool in managing complex portfolios of related projects.

In Australia, many public sector organisations at Federal and State Government level, the Australian branches of many European multi-nationals, and two of the four major banks, utilise organisational project management methods based on PRINCE2.

Many organisations see value in both methods, and reasons to extend both. In fact, the author qualified and requalified as a Certified Practising Project Director (the top level in the AIPM RegPM scheme), using as evidence a range of projects run under the PRINCE2 method but which provided proof of his competence in applying the PMBoK knowledge areas. A competent project manager should be at least aware of the PMBoK knowledge areas and would be able to apply them well in a PRINCE2 management framework.

So how would an organisation go about combining the two methods? This question can be approached by considering the needs of the four groups of stakeholders previously identified as project size or complexity increases. The following diagram should be viewed in conjunction with the discussion below it.



For all types of projects, in order to provide those responsible for governing projects with the controls they need, adoption of the PRINCE2 process model and the Project Board controls that it provides would seem to be a useful step. Organisations using the PMBoK would otherwise have to create these controls, in order to be seen to exercising effective organisational governance of their investments in project work.

Experience shows that for projects at the smaller, less complex end of the spectrum, either method will support project managers. As the size and complexity of the project increases, the project manager will need more and more tools to get ahead of the issues and cope with whatever emerges. At the extreme end, neither the PMBoK nor PRINCE2 will be sufficient – hence the emergence in 2006 of the College of Complex Project Management, and the additional guidance that has been generated, as well as the growing swell of interest in MSP.

PRINCE2 provides the *Managing Product Delivery* process as a standard interface between the Project Manager and Team Managers, regardless of the nature of the way the team will go about their work. Various PRINCE2 artefacts – Product Descriptions, Work Packages, Team Plans, Checkpoint Reports and associated processes for managing allocated work, help the team manager to plan and carry out their team's work, as well as providing the project manager with a standardised interface with team managers, regardless of the nature of the products being built or the techniques being used by the team, such as agile methods, design thinking or lean startup.

For project support, both methods provide guidance, but at the complex end of the project spectrum, other controls and tools such as Earned Value Management will need to be introduced, and the project office is best displaced by a program management office. The guidance provided by P3O will also be highly useful.

Conclusion

With respect to the needs of the project manager, the differences between the PMBoK and PRINCE2 methods appear to have narrowed since the last release of each method. In most, but not all, of the knowledge areas of project management, the PMBoK provides greater detail on tools and techniques, but at a high level the two methods are converging. With respect to the needs of other roles, and from the point of view of the organisation as a whole, PRINCE2 has been greatly strengthened, whereas the PMBoK remains essentially silent, because it focuses solely on the needs of individual project managers. PRINCE2 provides a wider range of guidance to facilitate better organisational control of projects.

There is no reason why an organisational project management method based on PRINCE2 and hence mandating a range of formal controls under which all projects must operate, could not be used as the foundation for a project run by a project manager with a PMP rigorously utilising the knowledge areas of the PMBoK.

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Author Bio

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