

Comparing the Differences and Complementary features of PRINCE2® and the PMI PMBOK® Guide

PRINCE2 is the UK Government's structured project management method. PMI stands for the Project Management Institute producing guidance on project management documented in the 'Guide to the Project Management Body of Knowledge' hence the PMI PMBOK® Guide.

PRINCE2®	PMI PMBOK®
Origins	
<p>PRINCE stands for Projects IN Controlled Environments and is a UK Govt sponsored initiative to improve the quality of UK project management.</p> <p>PRINCE2 was launched in 1996 to provide guidance on all types of project, not just information systems, as the original PRINCE was.</p> <p>PRINCE2 is a standard used extensively by the UK government and public sector, but is also widely used in the private sector, both in the UK and internationally</p>	<p>The Project Management Institute (PMI) continues to develop the Guide to the Project Management Body of Knowledge (PMBOK) to document the practices, tools and techniques describing the generally accepted sum of knowledge within the profession of project management.</p> <p>With its substantial membership, the American founded, but now very much world-wide organisation, has the most globally recognised project management qualifications in the world.</p>
Chronology	
<p>1979 Central Computing and Telecommunications Agency (CCTA now part of Office of Government Commerce - OGC) adopts PROMPTII, which was created by Simpart Systems Ltd in 1975, for all government information systems projects</p> <p>1989 Release of PRINCE, to supersede PROMPTII, again focusing on guidance for IT project management</p> <p>1996 Release of first edition of PRINCE2 which covers all types of projects. Produced by consortium of Duhig Berry (now Xansa), WS Atkins (now Atkins), and Penzer Allen with assistance from Parity Consulting under contract from CCTA</p> <p>Further revisions of PRINCE2 produced with significant updates in 2002 and 2005.</p> <p>In June 2009 most significant update to date was published.</p> <p>Key changes – simplification of the method, and the language used – as evidenced by the new manual being 120 pages shorter!</p> <p>Less proscriptive use of techniques such as Product Based Planning and the Quality Review Technique which have been embedded in Plans and Quality themes respectively. For instance we no longer have a rhomboid to represent a collective grouping.</p> <p>The introduction of seven basic principles which guide decision making throughout the life of the project.</p> <p>PRINCE2® is a Trade Mark of the Office of Government Commerce</p> <p>The principles are guiding obligations and good practices which whether the project is genuinely being managed using PRINCE2.</p> <p>The principles are listed below:-</p> <ul style="list-style-type: none"> - Continued business justification - Learn from experience - Defined roles and responsibilities - Manage by stages - Manage by exception - Focus on Products - Tailor to suit the project environment <p>The eight components have been replaced by seven themes and the eight processes have been reduced to seven.</p> <p>Finally the terminology has been aligned with other OGC publications such as Managing Successful Programmes (MSP), Management of Risk (MoR) and the OGC Gateway Review process.</p>	<p>1969 PMI founded in recognition of the management practices common to running projects in diverse industries.</p> <p>1981 Ethics, Standards and Accreditation (ESA) Management Group set up to develop standards focussing on these areas</p> <p>1983 Results of ESA project published consisting of</p> <ul style="list-style-type: none"> - Code of Ethics - Standards covering the six areas of Scope Management, Cost Mgt, Time Mgt, Quality Mgt, Human Resources Mgt and Communications Mgt - Guidelines for accreditation of educational institutes and certification of individuals <p>1984-1987 Development of 'The Project Management Body of Knowledge'</p> <p>1991-1996 Development of 'A Guide to the Project Management Body of Knowledge' (PMBOK® Guide)</p> <p>1997-2000 Development of the 2000 edition of the PMBOK® Guide</p> <p>2001-2004 Development of the Third Edition (2004) of the PMBOK® Guide</p> <p>2005- 2008 Development of the Fourth Edition (2008) of the PMBOK®</p> <p>The changes to the Fourth Edition have focused on clarity and ease of understanding. All processes were changed to verb noun format for instance - instead of "Scope Verification" we now have "Verify Scope".</p> <p>The overall number of processes has been reduced from 44 to 42 with Project Procurement Management being significantly simplified in its structure.</p> <p>Specific process changes are as follows-</p> <p>Develop Preliminary Project Scope Statement and Scope Planning were deleted from 3rd edition</p> <p>Collect Requirements and Identify Stakeholders were added and the six processes making up Project Procurement Management were simplified into four.</p> <p>The process interactions have been clarified with process flow diagrams at the beginning of chapters 4-12 being replaced with data flow diagrams.</p> <p>An entirely new appendix was added that addresses project management people skills has been added – further differentiating the PMBOK from PRINCE2</p>

Style of Document

The publication - Managing Successful Projects with PRINCE2 - gives clear guidance as to how a project should be run under PRINCE2.

This means that although there is a strong emphasis that the PRINCE2 approach should be tuned appropriately to a given project and organisation, there are clear guidelines to be followed. For instance it assumes very clear roles and responsibilities for each member of the project management team, along with guidance as to which appointments are made first, how the team is designed and appointed and so on.

The PMBOK is a more generalist document in that it recognises that life cycles and organisation structures can vary massively by industry sector and organisational culture.

It therefore provides more general guidance and covers more techniques than PRINCE2 particularly in the areas of costs and cost control, human resources, team development, procurement and solicitation.

It must be stressed that as it is 'A Guide to the PMBOK' it also references further external publications and sources of information.

Structure

The PRINCE2 main reference is 'Managing Successful Projects with PRINCE2' This 327 page reference book has been considerably slimmed down from its previous 458 pages. It is divided into the following sections

- Introduction
- Principles
- Introduction to themes
- Themes (7)
- Introduction to Processes
- Processes (7)
- Tailoring PRINCE2
- Appendices (5)
- Further Information
- Glossary and Index

The seven themes, which were previously referred to as components, consist of

- Business Case
- Organisation
- Quality
- Plans (Incorporating the Planning process and product based planning from the previous manual)
- Risk (Brought more into line with the Management of Risk MoR guidance)
- Change (combining Configuration Management, Change Control and the Change Control Technique for the previous manual)
- Progress (previously referred to as Controls)

The seven management processes consist of

- Starting up a Project
- Directing a Project
- Initiating a Project
- Controlling a Stage
- Managing Product Delivery
- Managing a Stage Boundaries
- Closing a Project

Planning, which was previously the eighth process, has been incorporated into the Plans theme

The processes give guidance on the detailed steps to go through in order to carry out structured project management within a PRINCE2 framework. Each process is divided into between three and eight activities (replacing the term sub-processes) each of which is described in terms of

- Purpose
- Objective
- Context
- An overview of the activities in each process showing the diagrammatic information flow and relationship of each activity with other activities and processes
- Each activity is described in terms of the recommended actions which make it up, the activity summary showing the documents referred to, created and updated, along with a responsibility table for each activity

For instance the first process Starting up a Project covers the initial steps to be carried out prior to the work being officially recognised as a project. There is new focus on ensuring that lessons are properly captured from previous projects to benefit the project that is imminent.

The PMBOK Guide is now 459 pages long (from 390) and is divided into the following sections

- Section I - The Project Management Framework
- Section II - The Standard for Project Management of a Project - covering project management process groups (5)
- Section III - The Project Management Knowledge areas (9)
- Section IV - Appendices (7)
- Glossary consisting of Inclusions and Exclusions, Common Acronyms and Definitions followed by the Index

Each knowledge area or chapter is divided into separate processes and defines each process in terms of its inputs, tools and techniques and outputs

- Project Integration Management
- Project Scope Management
- Project Time Management
- Project Cost Management
- Project Quality Management
- Project Human Resource Management
- Project Communications Management
- Project Risk Management
- Project Procurement Management

Project Integration Management covers the processes and activities needed to identify, define, combine, unify and coordinate the processes and project management activities within the Project Management Process Groups

Project Scope Management includes the processes needed to identify all the work required and only the work required to complete the project successfully, consisting of

- Collect Requirements
- Define Scope
- Create WBS (Work Breakdown Structure)
- Verify Scope
- Control Scope

Project Time Management includes the processes required to manage timely completion of the project.

- Define Activities
- Sequence Activities
- Estimate Activity Resources
- Estimate Activity Durations
- Develop Schedule
- Control Schedule

Project Cost Management includes the processes involved in estimating, budgeting, and controlling costs so that the project can be completed within the approved budget

- Estimate Costs
- Determine Budgeting
- Control Costs

Project Quality Management, covering the processes to ensure the project satisfies the required needs

- Plan Quality
- Perform Quality Assurance
- Perform Quality Control

Structure

Initiating a Project takes you through the detailed steps to firstly define the Management Strategies which will be required for Risk, Quality, Configuration Management and Communication.

This leads into setting up appropriate controls, developing the Project Plan, updating the Business Case before assembling all the information in a Project Initiation Document (PID) and preparing for the next stage

Directing a Project covers the key decision making steps made by the Project Board who act as the Sponsor / Steering Committee for a PRINCE2 project

Controlling a Stage covers the day to day management of a project by the Project Manager including authorising work, handling issues, monitoring and controlling the project, as well as communicating progress.

Managing Product Delivery covers the detailed planning, delegation, monitoring and control of work packages and reporting of progress

Managing a Stage Boundary covers the activities to prepare for the next stage of the project as well as handling Exception planning.

Closing a Project provides guidance on ensuring the project comes to an orderly close along with capturing and sharing lessons, preparing the Benefits Review Plan to evaluate benefits and passing on any follow on actions appropriately.

Tailoring PRINCE2 to the project environment takes all the guidance that was spread out in the previous manual and consolidates it into a single chapter. It gives guidance both in how best an organisation can embed PRINCE2 throughout the organisation along with how to tailor PRINCE2 to the needs of an individual project.

The five appendices are as follows

- A. Product Description Outlines – providing outlines for 26 standard management documents used within PRINCE2 from Benefits Review Plan to Work Package
- B. Governance – compares how well PRINCE2 addresses corporate governance requirements of project management
- C. Roles and Responsibilities – providing detailed role descriptions and decision making and assurance responsibilities for each of the individual and group roles within PRINCE2
- D. Product-based planning example – previously the manual had a chapter entitled Product Based Planning Technique where product is used as an alternative term for deliverable. The technique is now part of the Plans theme and we have an example of applying the technique in a project scenario
- E. Health check – provides a series of process-oriented checklists to assess how well PRINCE2 is being applied to your project

Project Human Resource Management includes the processes that organise, manage, and lead the project team

- Develop Human Resource Plan
- Acquire Project Team
- Develop Project Team
- Manage Project Team

Project Communications Management covers the processes required to ensure timely and appropriate generation, collection, distribution, storage, retrieval, and ultimate disposition of project information

- Identify Stakeholders
- Plan Communications
- Distribute Information
- Manage Stakeholder Expectations
- Report Performance

Project Risk Management is focused on increasing the probability and impact of positive events, and decreasing the probability and impact of events adverse to the project and consists of

- Plan Risk Management
- Identify Risks
- Perform Qualitative Risk Analysis
- Perform Quantitative Risk Analysis
- Plan Risk Responses
- Monitor and Control Risks

Project Procurement Management covering the processes to purchase or acquire the products, services, or results needed from outside the project team to perform the project

- Plan Procurements
- Conduct Procurements
- Administer
- Close Procurements

The six appendices

- A. Fourth Edition Changes
- B. Evolution of PMI's A Guide to the Project Management Body of Knowledge
- C. Contributors and Reviewers of PMBOK® Guide - Fourth Edition
- D. Application Area Extensions
- E. Additional Sources of Information on Project Management
- F. Summary of Project Management Knowledge Areas
- G. Interpersonal Skills

PMBOK areas supporting the PRINCE2 approach

There are several key project management areas that are not covered by the PRINCE2 approach. Generally this is covered by the PRINCE2 view that, despite the importance of these topics, they are specialist areas of knowledge and are covered elsewhere and can be managed using the method as an overall framework.

However, for a project manager to be confident and competent in carrying out their work, then ESI can assist them in developing these competencies.

1. PRINCE2 Planning process has a structured approach which takes you through sound planning steps, however, when identifying dependencies it proposes a list of activities accompanied by dependencies is produced. In the PMBOK far greater guidance is given on the use of Precedence Diagramming Method (PDM), Arrow diagramming Method (ADM), Conditional diagramming methods and Network templates in order to generate an effective network diagram. A network diagram is illustrated within PRINCE2, however, carrying out the calculations are not part of any current or proposed PRINCE2 examination.
2. In the previous version of PRINCE2, estimating techniques were not covered other than referring to 'top-down' and 'bottom-up' estimating done for Project and Stage plans respectively. This has been largely addressed in the revised Plans theme where more estimating techniques are outlined, with a single paragraph explanation of each given technique. The tools within the PMBOK Project Time Management and Project Cost Management sections are still more comprehensive than in the PRINCE2 manual, including such techniques as Programme Analysis and Review Technique (PERT) and Reserve Analysis and Cost of Quality (COQ) analysis along with indicating confidence ranges of possible results, would all be useful additional techniques.
3. Scheduling within PRINCE2 does not give guidance of how to improve the schedule if overall timescales are unacceptable.

The PMBOK techniques of fast-tracking and crashing projects focus on how to improve project timescales in a cost effective manner.

PMBOK areas supporting the PRINCE2 approach

4. Costing and cost control are handled lightly within PRINCE2. The main technique being the plotting of a cumulative cost curve (S-curve) with tolerance margins illustrated, and recording the actual costs of the project with a second line.
The powerful performance measurement techniques such as Earned value management, as given in the PMBOK are missing from PRINCE2. In fact this is a prime selling point for PMI training as PRINCE2 relies heavily on the concepts of management by exception and use of tolerances, but without the use of Earned value management you cannot readily determine the progress of your project and how healthily it is performing.
5. The generation of cost estimates is extensively supported in the PMBOK guide, giving great support to project managers with financial responsibilities, with techniques such as vendor bid analysis and use of cost management plans.
All the above points are supported by ESI's Scheduling and Cost Control - the majority (1-4) are covered by Managing Projects and Managing IT Projects
6. Quality is a major topic within each of the approaches. Key PMBOK techniques which are not covered in PRINCE2 include benefit/cost analysis, benchmarking, flowcharting techniques such as Ishikawa or cause-and-effect diagrams, design of experiments, and cost of quality. The specific area of quality control is again supported by additional techniques such as control charts, Pareto diagrams, sampling and trend analysis
The above is supported by ESI's Quality for Project Managers
7. PRINCE2 agrees that Team work and communications are important facets of the Project Manager role but gives no guidance other than suitable document outlines to use when communicating progress or escalating concerns
The ESI Project Leadership, Management and Communications course covers such areas as setting direction, aligning people, motivating and inspiring, leading teams, communicating, building relationships, facilitating ethical conduct, negotiating, and leading change, ensuring project managers are rounded out with the second half of their required skill-set.
8. Project Human Resource Management within PMBOK also covers staff acquisition, performance appraisal and health and safety regulations, none of which is mentioned in PRINCE2.
9. PRINCE2 covers communications primarily through the development of a Communications Management Strategy outlining the overall approach to engaging stakeholders. However, it goes little further than listing headings in the Communication Management Strategy product outline and providing a six step approach to stakeholder engagement derived from OGC's Managing Successful Programmes (MSP) guidance.
The PMBOK explores use of differing technologies, communication skills, retrieval systems and distribution methods, providing the project manager with additional tools.
The ESI Project Leadership, Management and Communications course covers point 9 and partially covers point 8 above
10. Risk is again a topic which both approaches explore in some detail. The main additional elements in the PMBOK approach cover the advantages and disadvantages of linear and nonlinear numeric probability and impact scales, project assumptions testing, data precision ranking and quantitative risk analysis techniques. Techniques such as Monte Carlo and decision tree analysis (referred to as probability trees in PRINCE2) are briefly described in the PRINCE2 manual; however, it lacks the technical detail provided in the PMBOK which enables a more analytical approach to be taken.
ESI's Risk Management covers the above point
11. Perhaps the largest single section of project management which is not covered in the PRINCE2 approach is Project Procurement Management.
ESI's Contracting for Project Managers course is aligned with this PMBOK chapter and equips the project manager with the skills and knowledge to handle procurement and solicitation namely determining what to procure and when along with handling the entire contract process from planning, obtaining quotations/proposals, selection, contract administration and completion and settlement of the contract.
ESI's Managing Projects event assists several of the points above particularly in the areas of planning and costing, but not to the same degree of detail as the Scheduling and Cost Control event
ESI's Project Management Applications covers many of the above items in a rigorous week long case study

Competency Areas supported by the ESI range of courses

The first two competency areas of Project Integration Management and Project Scope Management are adequately covered by the PRINCE2 approach

Project Time Management

PRINCE2 does not cover mathematical analysis techniques such as CPM and PERT analysis duration compression techniques such as crashing and fast tracking to improve the project schedule. Similarly performance measuring techniques such as Earned Value and Variance Analysis are not covered ESI's Scheduling and Cost Control and to a lesser extent Managing Projects and Project Management Applications support the above.

Project Cost Management

The PMI model provides far greater guidance on cost estimating, including use of cost accounts, different estimating techniques, budgeting and cost control techniques such as Earned Value Management ESI's Scheduling and Cost Control and to a lesser extent Managing Projects and Project Management Applications support the above.

Project Quality Management

The PMI model covers significant additional techniques such as Benefit/Cost Analysis, Benchmarking, Flowcharting, Cost of Quality concepts, Operational Definitions. It also covers technical quality control techniques such as Inspection, Control Charts, Pareto diagrams, Statistical Sampling concepts and Trend Analysis.

Competency Areas supported by the ESI range of courses

ESI's Quality for Project Managers supports the above areas

Project Human Resource Management

PRINCE2 is lacking in guidance for Staff Acquisition, Team Building and Team Development, Reward and Recognition systems and all the people areas of project management such as Negotiation skills, handling conflict and motivating people.

The ESI Project Leadership, Management and Communications covers the above points

Project Communications Management

This area is handled quite lightly within PRINCE2 primarily focussing on the development of a Communications Plan and use of specific documents and review meetings.

The PMI approach gives insight into communication concepts such as Sender / Receiver models and cultural communication issues, choice of presentation techniques and content to communicate with different people, meeting management techniques such as dealing with conflict and communication skills. Finally, tools and techniques for assisting performance reporting and analysis such as Earned Value Analysis.

The ESI Project Leadership, Management and Communications covers the above points with Earned Value in Scheduling and Cost Control and to a lesser extent Managing Projects

Project Risk Management

PRINCE2 does not cover areas such as Quantitative Risk Analysis along with Risk Identification techniques such as Delphi, Interviewing, SWOT Analysis, Assumptions Analysis, Diagramming Techniques, Data Precision, use of ordinal vs. cardinal values, Sensitivity Analysis, Decision Tree Analysis and simulation techniques such as Monte Carlo

ESI's Risk Management covers the above

Project Procurement Management

PRINCE2 does not cover this competency.

The PMI approach can provide the project manager with a range of vital skills to assist the entire Procurement and Solicitation process. Procurement & Solicitation Planning, the Solicitation process, Source Selection, Contract Administration and Contract Closeout. It also includes such tools and techniques as make or buy analysis, contract type selection, bidder conferences, handling of proposals, contract administration and payment systems.

ESI's Scheduling and Cost Control covers the above areas

In Summary

PRINCE2 and the PMI PMBOK are different types of publication but have many complementary elements.

The PRINCE2 reference often guides you to what you should be doing but sometimes falls short of providing you with the knowledge of how to carry out the activity. For instance 'Investment Appraisal' is a heading within the Business Case but PRINCE2 does not explain any of the techniques or methods such as Net Present Value (NPV), Internal Rate of Return (IRR) etc. whereas, the PMI PMBOK attempts to point you to specific tools to actually help you carry out the required steps.

Several key areas of project management, such as the people side of projects, procurement, contract administration and cost control in general are not adequately covered within PRINCE2 and can be very strongly complemented by the PMI approach.

Similarly in areas of project planning and control the PMI approach gives you practical guidance in not only preparing good quality plans, but how to interpret them and make use of them to control your project to deliver your projects more successfully in the future.

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