Praxis®

Praxis Framework

Comparative glossary of project, programme and portfolio terminology.

The Praxis Framework comparative glossary of project, programme and portfolio management terms.

Version 1.0, September 2015.
Version 1.1, October 2015.
Version 1.2, March 2016

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Cover design taken from Praxis Framework: An integrated guide to the management of projects, programmes and portfolios, published by the Association for Project Management.

ISBN: 978-1-903494-25-7.

Introduction

Welcome to the Praxis Framework comparative glossary.

The aim of this document is twofold. Firstly it acts as a conventional glossary of terms. Secondly, it provides comparisons between terms from the guides listed in the coverage section below. The glossary is in no way a substitute for the various guides. It merely explains the relationships between different terms so that someone familiar with one terminology can quickly discover equivalents or similarities in another.

Using the glossary

The glossary contains many hyperlinks. Hyperlinks under headings in the left column are external links to the Praxis Framework web site. These provide more extensive and detailed information about the term. Hyperlinks in the right hand column are internal to the glossary.

Unlike PRINCE2™ activities and PMBoK® Guide processes, Praxis activities are not described by individual entries in the glossary as they are adequately covered by the links to the Praxis Framework web site. These activities are therefore highlighted in italics and not hyperlinked. The same is taken for steps in procedures in the PRINCE2 themes.

There are many references to 'equivalent terms' throughout the glossary to explain how terms in one guide relate to terms in another. These equivalences should not be seen as exact matches. Different guides have different structures and many of the 'equivalent terms' are approximate or near equivalents. To gain a full and detailed understanding of the relationships between terms they need to be seen in context in the corresponding guides.

Conventions

Language

The glossary is written in British English but an increasing number of pages that the glossary links to at www.praxisframework.org are being translated by volunteers around the world. Newly translated pages are frequently uploaded.

The links will take you to the English language pages which have links to any available translations.

Inclusion

The inclusion of a guide in the Praxis Glossary coverage does not automatically mean that every individual entry from the guide's glossary is included. Many guides choose to include generic terms that have no special meaning within the field of P3 management. Some also include terms that are not sufficiently described within their own text. These are all excluded from the Praxis Glossary.

Capitalisation

The glossary includes terms from many different guides. Each guide has a different policy on capitalisation. For example:

- PRINCE2 capitalises process names, documents and roles.
- The PMBoK® guide capitalises process and knowledge area names but not documents and roles.
- ISO21500 capitalises the first letter of processes but not subject groups, documents or roles.
- The APM BoK only capitalises in accordance with normal written English.

The approach in this glossary is to capitalise processes as they are always unique to each guide. Document, role and other terms are often common to multiple guides, so these are only capitalised in accordance with normal written English.

Reference numbers

The PMBOK® guide and ISO21500 often have the same name for processes that are slightly different. To differentiate them, PMBoK® guide and ISO21500 processes have their reference numbers appended to the process name.

These can quickly be distinguished as the PMBoK® guide uses two digits and ISO21500 uses three.

Coverage

Version 1.0 compares terms from the following guides: (Italic abbreviations in brackets are used to reference these guides within the glossary)

- Body of Knowledge v6 published by the Association for Project Management (*APM BoK*).
- PRINCE2™ 2009 edition published by Axelos Ltd.
- A Guide to the Project Management Body of Knowledge fifth edition published by the Project Management Institute (*PMBoK®guide*)
- The Praxis Framework published by Praxis Framework Ltd.

Version 1.1 incorporates:

- PRINCE2 Agile™ published by Axelos Ltd.
- The guide to Planning, Scheduling, Monitoring and Control published by the Association for Project Management (*APM PSMC*)

Version 1.2 incorporates

- The U.S. Government Accountability Office (GAO), Schedule Assessment Guide (December 2015) (*GAO SAG*)
- Managing Successful Programmes (*MSP*) 2011, published by Axelos Ltd.

Updates

The glossary will be updated regularly. The next update will incorporate Managing Successful Programmes and the standard for program management from the Project Management Institute. Subsequent updates will incorporate guides and standards for portfolio management.

To be notified about the release of new updates, you can either email us with 'Praxis Glossary' as the subject or simply follow us on Twitter.

0/100 rule	See earning rules.
50/50 rule	See earning rules.
Abstract resource	Abstract resources can be introduced into a schedule for computer based resource scheduling. Unlike resources that represent machinery or labour that are needed to perform an activity, abstract resources are introduced purely to provide extra control over the scheduling process. For example, a resource called 'space' could be assigned to activities that are working in a confined space. If two activities run concurrently but, when added together, exceed the stated limit in space, the resource scheduling algorithm will schedule them at different times.
Accept	One of the four possible threat responses.
Accept a Work Package	An activity in the Managing Product Delivery (MP) process of PRINCE2. The purpose of this activity is to ensure that there is agreement between the project manager and team manager on the definition of a work package. This will include performance of risk analysis, agreement of tolerances and inclusion of the work package in the team plan. The equivalent in Praxis is the *accept work package* activity in the development process, which works in conjunction with the *authorise work* activity in the delivery process. This formal delegation of work from the project manager to a team or individual is not explicit in the PMBoK® guide or ISO21500 but could be considered implicit in the processes Direct and Manage Project Work (PMBoK® guide) and Direct project work (ISO21500).
Acceptance	The formal act of accepting a deliverable according to its pre-defined acceptance criteria. In this context a 'deliverable' could constitute a product, work package or project output.
Acceptance criteria	A list of criteria that must be met before a deliverable can pass its acceptance test. The criteria should be measurable so that the deliverable can be verified. In agile projects these criteria may be referred to as the definition of done for a user story.

Acceptance test

A test used to confirm that acceptance criteria have been achieved.

In Praxis, acceptance tests will typically be performed as part of the *deliver products* activity in the development process and as part of the *handover* activity in the closure process.

In PRINCE2, acceptance tests would form part of the deliver a work package and hand over products activities.

In the PMBoK® guide accepted deliverables are an output of the Validate Scope process. ISO21500 does not have an explicit procedure for the acceptance of deliverables.

Accepted deliverables

Products that have been validated by their end users as meeting their acceptance criteria.

Accountability matrix

See responsibility assignment matrix (RAM).

Accountable

One of the four types of involvement (RACI) in a responsibility assignment matrix.

Someone who is 'accountable' is personally answerable for an activity. Unlike responsibility, accountability cannot be delegated.

Accounting rate of return

More:

- Encyclopaedia

The accounting rate of return (ARR) is a simple investment appraisal technique for evaluating less complex projects and their benefits.

A key factor that is ignored in ARR is how the value of money changes over time, i.e. in an economy that has price inflation, the value of money earned today is different to the same amount earned in five years' time. This is taken into account in more sophisticated discounted cash flow methods such as net present value and internal rate of return.

Accrual

See accrued cost.

Accrued cost

The cost of work that has been done but for which payment is not yet due. For example, if a contractor is performing work valued at £5,000 and payable on completion, and has completed half the work, there is £2,500 of accrued cost.

If the contractor does not complete the work you may not be committed to paying. Once the work is complete according to the contract, but it has not yet been paid, the cost becomes a committed cost.

Acquire Project Team (9.2)

The second process within the PMBoK® guide's project human resource management knowledge area. It is an executing process that uses the staffing management plan to build the team that will be executing the project. Its main outputs are specific assignments and an updated project management plan.

The corresponding areas of Praxis are the mobilisation function and the process activities where mobilisation is used, i.e. the definition process and boundaries process.

There is no obvious equivalent in PRINCE2 but it could be argued that mobilisation is implicit in the plan the next stage activity in the Managing a Stage Boundary (SB) process.

In ISO21500 the equivalent process is Establish project team.

Action centred leadership

See Adair.

Activity

An activity is a piece of work that occurs over a period of time. This is generally used in two ways:

1. The individual pieces of work that are needed to develop the objectives of a project. These are the building blocks of a network diagram and form the basis of building detailed estimates of the duration, cost and resource requirements of the project.
2. To describe the components of a process that achieves the goals of a process. This form of the term is used by both Praxis and PRINCE2.

Activity attributes

The attributes of an activity, including information such as dependencies, resource requirements, imposed dates, constraints and assumptions.

Activity box

In a precedence diagram each activity is represented by a box. The activity box is subdivided to provide space for the activity description and the results from a critical path analysis, namely ES (earliest start), D (duration), EF (earliest finish), LS (latest start), F (float) and LF (latest finish).

Activity calendar

In network analysis different activities may have different working patterns, e.g. some activities may only be performed at weekends. All planning software allows the allocation of activity calendars that are used in scheduling to determine the days on which an activity may occur.

See also: calendars.

Activity code

The code given to an activity to ensure it has a unique reference. This can then be used for filtering and ordering activity based reports.

Activity cost estimate	The estimated cost of an activity including all direct costs for resources. Individual activity cost estimates are consolidated in bottom-up estimating to provide detailed estimates for work packages or sections of the work breakdown structure.
Activity description	The description of an activity normally written above the arrow in an activity on arrow diagram or in the centre of the activity box in a precedence diagram.
Activity duration	See duration.
Activity list	This is simply a list of the activities needed to produce the products contained in the work breakdown structure. While Praxis does not explicitly define an activity list as an output, it is implicit within the identify work activity in the schedule management procedure. In ISO21500 the activity list is an output of the Define activities process and in the PMBoK® guide it is also an output of the Define Activities process. In PRINCE2 it is an output of the *identifying activities and dependencies* step of the planning procedure.
Activity network	See network diagram.
Activity on arrow More: – Encyclopaedia	The original form of network diagram that has effectively been superseded by the precedence diagram format. In an activity-on-arrow network, activities are represented by a line between two circles. The first circle represents the start of the activity and is known as the start event (sometimes called the i-node). The second circle represents the finish of the activity and is known as the finish event (sometimes called the j-node).
Activity on node	A form of network diagram in which the activities are represented by nodes and dependencies are represented by arrows. The most common form of activity on node network is the precedence diagram method (PDM).
Activity weeks method	A simple measure of project progress that records the number of activities in progress each week.
Activity-based cost	See activity cost estimate.

Actual cost	The actual money spent in performing an activity so far. The total actual cost may include elements of accrued costs and committed costs. When used in earned value management this is sometimes referred to as actual cost of work performed (ACWP).
Actual cost of work performed (ACWP) More: – Encyclopaedia	An earned value management term representing the actual cost of performing an activity, part of a project or the entire project. Some practitioners prefer the simpler term actual cost (AC).
Actual duration	The time that an activity actually took to complete.
Actual effort	The actual time expended by a resource in the performance of an activity.
Actual event time	The time that an event actually occurred in an activity on arrow network.
Actual expenditure	See actual cost.
Actual finish date	The date an activity actually finished.
Actual progress	A measure of the work that has been completed.
Actual start date	The date an activity actually started.
Actual time expended (ATE)	The total time expended on the project to date in earned value management.
Adair More: – Encyclopaedia	John Adair developed his leadership model while working as a lecturer at the Sandhurst Military Academy in the UK. He was one of the first proponents of the idea that leadership can be trained and developed rather than being a purely innate ability in 'born leaders'. Adair[1] identified three overlapping areas of core responsibility: task, team and individual. He called the balancing of these three elements, 'Action Centred Leadership'.
Adaptive life cycle	A development life cycle that has a high degree of stakeholder involvement and is also highly iterative and incremental. Agile approaches are the most common example.

[1] Adair J., (revised 2009), Effective Team Building, Pan MacMillan.

Adjourning
More:
- Encyclopaedia

A stage Bruce Tuckman added to his model of team building in 1977 to signify the stage where the team disbands.

Administer procurements (4.3.37)

The ISO21500 process that covers the management of suppliers. It includes the checking of performance and taking action as required to maintain compliance with project objectives.

In Praxis the nearest equivalent is the *monitor* step in the contract management procedure which works in conjunction with the control function and the delivery process.

The equivalent in the PMBoK® guide is Control Procurements.

PRINCE2 does not contain processes that explicitly deal with external contracts although the role of the senior supplier in the organisation structure is relevant. Controlling contracts should be seen as implicit in other control functions.

Affinity diagram

The collection and presentation of ideas into related groups. Typically done as part of a brainstorming exercise where ideas are written on cards which are then arranged into groups.

Aggregated risk

A term used by MSP to describe the totality of risk across the programme.

Agile
More:
- Encyclopaedia

Agile project management is an umbrella term for development methods that take an incremental and iterative approach. Although it originated in software development, and is still principally found in that environment, the principles can be applied to other disciplines.

The different flavours of agile are united by certain key characteristics:

- Short development iterations known as sprints.
- Very close working between developers and stakeholders.
- Regular reprioritisation of work.
- Rapid and flexible approach to addressing scope change.

Agilometer

A tool incorporated into PRINCE2 Agile that assesses the level of risk associated with using agile in combination with PRINCE2.

Analogous estimating

See comparative estimating.

Analytical estimating

See bottom-up estimating.

AND relationship	Most network diagrams only use this type of dependency between activities. It means that an activity cannot start until all its predecessors are complete. See also OR relationship and probabilistic networks.
APM Body of Knowledge (APM BoK)	The UK Association for Project Management's Body of Knowledge covers project, programme and portfolio management in 68 functions based on a functional analysis of the discipline. The equivalent in Praxis is the knowledge section of the framework. Although much broader, in principle the APMBoK corresponds to the themes in PRINCE2 and the tools and techniques in the knowledge areas of the PMBoK® guide. Since ISO21500 processes do not contain tools and techniques the standard does not have equivalent functional guidance.
APM PSMC	The term used in this glossary for the APM publication on planning, scheduling, monitoring and control. The book is subtitled The Practical Project Management of Time, Cost and Risk.
Application area	This term is quoted by the PMBoK® guide to describe a category of projects that share a common feature. Common features may be technical, commercial, environmental or any other aspect of a project's nature. E.g. 'Internet Projects' is a technical application area, 'Marketing Projects' is a commercial application area and 'Government Projects' is an environmental application area.
Applied direct costs	The actual direct costs of labour, material and all other direct resources in a time period independent of when the costs are committed or due to be paid.

Appoint the executive and the project manager	The first activity in the PRINCE2 process: Starting up a Project (SU) Having received a project mandate, the first step in PRINCE2 is to appoint the project executive who will lead the project board (the body providing sponsorship in a PRINCE2 project) and a project manager who will perform the day-to-day management of the project. The outputs of this activity are agreed job descriptions for both roles. In Praxis these appointments are part of *appointing the identification team* in the identification process. The equivalent appointments in the PMBoK® guide take place around the Develop Project Charter process. ISO21500 has a similar process to the PMBoK® guide (Develop project charter) but doesn't make any reference to the sponsor.
Apportioned effort	Effort that is not easily measured or divisible into discrete work packages but which is related and proportional to effort that can be measured. This typically refers to overhead effort such as project management.
Approval to proceed	The approval necessary before commencement of the next phase, stage or tranche of a project or programme.
Approved change requests review	A review of change requests that have been approved to check that they have actually been implemented.
Arbitration	A way of resolving contractual disputes without resorting to legal action in the courts. Many contracts will nominate an arbitrator who may be asked to rule on a specific aspect of a contract that is in dispute.
Archived plan	Some computer packages allow versions of a schedule to be archived. This is particularly useful where a project is subject to a baseline review. If the project schedule needs to be re-baselined, then the original baseline can be archived to maintain a record of the changes.
Arrow	The arrow drawn between two events in an activity on arrow network. Also sometimes used as an abbreviation for activity on arrow as in "an arrow network".
Arrow diagram method	See activity on arrow.

As late as possible	A term used in computer scheduling packages to indicate that an activity should be performed as late as possible, i.e. it should be scheduled to take up its entire amount of float.
As of date	See progress date.
As soon as possible	A term used in computer scheduling packages to indicate that an activity should be performed as soon as possible, i.e. not scheduled to take up any of its float.
As-built schedule	A schedule that illustrates the actual performance of a project.
Ascertained cost	An alternative name for a cost plus fee contract.
As-is state	The current structure, operation and performance of business as usual before being changed by a project or programme.
Assemble the Project Initiation Documentation	This is the last activity in the PRINCE2 Initiating a Project (IP) process. It brings together all the information developed by other activities within the process and assembles it as the project initiation documentation (PID). The PID then forms the basis of a decision whether or not to proceed with the project in the authorize the project activity. In Praxis the equivalent documentation is brought together by the *consolidate definition documentation* activity in the definition process. The PMBoK® guide process, Develop Project Management Plan is similar in scope and meets the same objective of having comprehensive documentation to support approval of the execution of the project. The corresponding process in ISO21500 is Develop project plans.
Assess risks (4.3.29)	The ISO21500 process that is concerned with analysing the identified risks. It only references qualitative risk analysis but if quantitative risk analysis were required it should be included in this process. In both Praxis and PRINCE2 this is covered by the assess activity in the risk management procedure. Both make reference to quantitative analysis as well as qualitative analysis. The equivalents in the PMBoK® guide are Perform Qualitative Risk Analysis and Perform Quantitative Risk Analysis.
Assignment	Often used to describe the work on an activity attributed to a specific resource.

Assumptions

It is inevitable that in developing project documentation, many assumptions will have to be made. These will be assumptions about available resources, risks or technology; there will be estimating assumptions for both time and cost and assumptions about the changing external context.

It is a common excuse that "there is no point in producing a plan that will be based on so many assumptions". Assumptions cannot be avoided and the need to make them does not mean that it is not worth producing project plans. The only rule is that assumptions must be documented.

Assumptions analysis

Assumptions should be periodically examined to assess the likelihood of the assumption proving false and the potential impact of that false assumption.

This will usually result in risk events being added to the risk register.

Assurance

More:

- Knowledge
- Competence
- Capability maturity
- Resources

Assurance is the set of systematic activities intended to ensure that the objectives and management processes of a project, programme or portfolio are fit for purpose.

In Praxis the goals of assurance are to:

- review management planning;
- monitor effectiveness of functions and processes;
- give stakeholders confidence that the work is being managed effectively and efficiently.

This Praxis topic is equivalent to the P3 Assurance topic in the APM BoK. PRINCE2 divides this into project assurance and quality assurance.

The equivalent in ISO21500 is the Perform quality assurance process and in the PMBoK® guide it is also the Perform Quality Assurance process.

Assurance management plan

More:

- Description
- Templates

The assurance management plan sets out the preferred procedures, tools and techniques to be used in assurance.

This should cover both internal and external assurance and unlike other management plans will be owned by the sponsor rather than the project or programme manager.

Attribute sampling

A quality control method that samples a small set of products and uses the results to make predictions about the whole population.

Useful in a project where lots of products have common attributes but also useful when sampling a small set of projects to assess the overall capability maturity of a portfolio of projects.

Audit	A systematic evaluation of how a project or programme is being managed against a predetermined set of criteria. Projects and programmes are designed to meet strategic organisational objectives. Senior management will rely on audits for assurance that the project or programme remains aligned with those objectives and is being managed in a way that maximises the probability of achieving all the benefits set out in the business case.
Authorised unpriced work	Work that has been authorised but for which a contract price has yet to be agreed.
Authorize a Stage or Exception Plan	The delivery of a PRINCE2 project is usually divided into stages. Each stage must be approved by the project board before it can be started. This activity is the point at which each new stage is approved and is part of the Directing a Project (DP) process. The same activity is used to approve exception plans when they are required. The corresponding activity in Praxis is *review request for authorisation* in the sponsorship process. The name reflects the fact that authorisation is not guaranteed. There is no equivalent in the PMBoK® guide or ISO21500 since they do not contain specific sponsorship processes.
Authorize Initiation	In PRINCE2 the Initiating a Project (IP) process is where the detailed planning is done. Before investing in the initiating process the project board must approve a plan for this detailed work and the initial outline plan for the project (the project brief). This activity considers the brief and decides whether to proceed. The corresponding activity in Praxis is *review request for authorisation* in the sponsorship process. The name reflects the fact that authorisation is not guaranteed. There is no equivalent in the PMBoK® guide or ISO21500 since they do not contain specific sponsorship processes.

Authorize project closure	An activity in the PRINCE2 Directing a Project (DP) process which considers a request to close the project. The corresponding activity in Praxis is *review request for authorisation* in the sponsorship process. The name reflects the fact that authorisation is not guaranteed. There is no equivalent in the PMBoK® guide or ISO21500 since they do not contain specific sponsorship processes.
Authorize the Project	This is an activity within the PRINCE2 process, Directing a Project (DP). Once the project initiation documentation (PID) has been assembled, it is submitted to the project board for approval. If the PID is accepted, the project manager can proceed with the first stage of the project. The corresponding activity in Praxis is *review request for authorisation* in the sponsorship process. The name reflects the fact that authorisation is not guaranteed. There is no equivalent in the PMBoK® guide or ISO21500 since they do not contain specific sponsorship processes.
Authorize Work Packages	This is an activity within the PRINCE2 process, Controlling a Stage (CS). When a project manager assigns work to teams in the form of a work package. This package contains the product description(s) of the product(s) that must be developed and also specifies timescales, costs and progress reporting arrangements. This activity works in conjunction with the accept a work package activity in the Managing Product Delivery (MP) process. The equivalent in Praxis is the *authorise work* activity in the delivery process, which works in conjunction with the *accept work package* activity in the development process. This formal delegation of work from the project manager to a team or individual is not explicit in the PMBoK® guide or ISO21500 but could be considered implicit in the processes Direct and Manage Project Work (PMBoK® guide) and Direct project work (ISO21500)
Avoid	One of the four possible threat responses.

Backlog	A term frequently used in agile development for a list of prioritised product requirements or features. Prioritisation is typically done using techniques such as MoSCoW. Each sprint or timebox plans to deliver a selection of products or features from the backlog.
Backlog item	An entry in a backlog. This may be in the form of a user story or activity.
Backward pass More: – Encyclopaedia	The second phase of critical path analysis. It calculates the latest starts and latest finishes of activities.
Balance	A phase in the APM BoK portfolio life cycle where the combined risk, resource usage, cash flow and impact on the business of the component projects and programmes is balanced. Also an activity in the Praxis portfolio management process.
Balanced matrix More: – Encyclopaedia	A form of matrix organisation that gives equal authority to the project and functional sides of the matrix. There is a designated project manager but he or she is still within one of the functions. Although better for the project than the weak matrix, there is still the danger that the project manager has divided loyalties between the project and his or her functional manager.
Bar chart	See Gantt chart.
Base date	See progress date.
Baseline	A baseline is a measure of anything that may change, before it is changed. For example: • In project control a baseline schedule will be used to compare with actual progress. • In benefits management the performance levels of the business will be baselined in areas that are expected to achieve improved performance. A budget is a form of cost baseline.
Baseline cost	The amount of money an activity, project or part of a project was intended to cost when the schedule baseline was set.

Baseline duration	The duration that an activity, project or part of a project was intended to take when the schedule baseline was set.
Baseline effort	The effort assigned to an activity, project or part of a project when the schedule baseline was set.
Baseline finish date	The scheduled finish date of an activity, stage or milestone at the time the schedule baseline was set.
Baseline management product	In PRINCE2 this is a type of management product that, once approved, is subject to formal change control.
Baseline review	A review to establish whether the baseline being used is still valid for the purposes of monitoring progress on the project. If the scope of the project has changed significantly since the baseline was set, it may not be valid to compare current progress against the original baseline. It may be necessary to reset the project's baseline in order to exercise control.
Baseline schedule	When the plans are agreed and work is about to start on the project's products, the project schedule and costs are baselined. These provide reference points against which progress can be compared as work proceeds. During the project, reports are produced that compare actual progress against the baselined schedule. Typical examples are the financial comparisons produced during earned value management and an actual vs. baseline Gantt chart. The GAO Schedule Assessment Guide also points out that this baseline should represent the "consensus of all stakeholders" with regard to the schedule.
Baseline start date	The scheduled start date of an activity, stage or milestone at the time the schedule baseline was set.
Basis document	A document from the GAO Schedule Assessment Guide that provides a narrative for the Integrated Master Schedule (IMS). It describes the approach to logic, resources and calculation used in the IMS and is therefore very similar in scope to the schedule management plan in Praxis.
Basis of estimates	Documentation that explains and supports how estimates were constructed.

Belbin

More:

- Encyclopaedia

An often quoted system for categorising people's roles within a team is that of R. Meredith Belbin who studied teams working on management games and experimented with different mixes of people.

His initial approach was to group the most able people together to form an elite team. These teams did not perform well and Belbin concluded that a high performing team needs a complementary mix of characters. He identified nine team types, each of which have positive contributions to make to a team but also have what Belbin terms 'allowable weaknesses'.

Benefit

All projects and programmes must deliver some form of benefit to the host organisation otherwise there is no point in undertaking the work. Some benefits, such as cost savings through lower energy bills, are tangible and easily quantifiable. Others, such as increased staff morale are harder to quantify.

Change management must be used to derive tangible benefits from the outcomes. For example, increased staff morale may lead to lower staff turnover, which in turn could lead to a tangible and quantifiable saving from reduced recruitment costs.

The sum of the quantifiable benefits is what will justify the investment in the project as described in the business case.

Benefit owner

The benefits that are identified in a business case must have owners. Overall ownership of benefits resides with the sponsor.

Individual benefits will be owned by the person who is responsible for managing the change that delivers the benefit – often referred to as a business change manager.

Benefit profile

More:

- Description

A benefit profile is used to define both benefits and dis-benefits. It is typically developed during the definition process of a project or programme following requirements management. The profile includes sections that describe the benefit or dis-benefit and how it will be realised and measured.

Benefit realisation review

See benefits review.

Benefit/cost analysis

The analysis of the potential costs and benefits of a project to allow comparison of the returns from alternative forms of investment. Usually expressed as a simple ratio of the value of benefits to costs.

Sometimes referred to as cost/benefit analysis. The principle is exactly the same but the ratio is reversed.

Benefit/project matrix

There is rarely a one-to-one relationship between benefits and projects within a programme. It is more usually the case that a project will contribute towards more than one benefit and a benefit will be facilitated by more than one project.

A benefit/project matrix maps projects against benefits. It can be populated with the proportion of the value of each benefit that is attributable to each project. This helps with the development of business cases for each project.

Benefits log

See benefits register.

Benefits management

More:

- Knowledge
- Competence
- Capability maturity
- Resources

This Praxis function defines benefits, implements the necessary change and ensures the benefits are realised. Its goals are to:

- define benefits and dis-benefits of the proposed work;
- establish measurement mechanisms;
- implement any change needed in order to realise benefits;
- measure improvement and compare to the business case.

Also a function in the APM BoK.

PRINCE2, ISO21500 and the PMBoK®* guide do not include the realisation of benefits but they make reference to it being performed after the project is complete, i.e. projects run using these three guides concludes when the output is delivered. In Praxis the realisation of benefits may be part of a project.

* It is intended to incorporate benefits management in the sixth edition of the PMBoK®

Benefits management (MSP theme)

This theme from MSP deals with the management of benefits from definition through to realisation. It works in conjunction with processes in the transformational flow and Realizing the Benefits in particular.

It covers the same ground as the benefits management function in Praxis.

Benefits management plan

More:

- Description
- Templates

A separate benefits management plan (as opposed to a benefits section in the scope management plan) will often be required where there are multiple benefits, significant change and the relationships between outputs and benefits are more complex, i.e. a benefits management plan is usually appropriate where the work is managed as a programme rather than a project.

Benefits map

More

- Sample

A benefits map is a form of influence diagram and is needed where there are complex relationships between multiple outputs, benefits and the strategic objectives that the benefits support. Within these relationships there may be dis-benefits, and outcomes that form a bridge between outputs and benefits.

Benefits realisation process

More:

- Method
- Competence
- Maturity

This Praxis process manages the realisation of benefits for both projects and programmes.

It is usually the case that simply producing an output does not automatically realise benefits. In most cases an output is used to change some aspect of an organisation's mode of operation or environment. Implicit within the word 'change' is a quantifiable improvement in one or more performance indicators to which value has been assigned.

The goals of this process are to:

- establish the current state of what is being changed;
- co-ordinate the delivery of outputs with the management of change;
- ensure changes are permanent;
- establish whether benefits have been achieved.

In its simplest form, realising benefits is about measuring current performance, helping the people who make up the organisation through the period of change (the transition) and finally, measuring the improvement in performance.

PRINCE2, ISO21500 and the PMBoK® guide do not include the realisation of benefits but they make reference to it being performed after the project is complete, i.e. projects run using these three guides concludes when the output is delivered. In Praxis the realisation of benefits may be part of a project.

Benefits register

A list of the benefits arising from a project or programme with key data about each benefit. This acts as an index of benefit profiles.

Benefits review	Benefits are realised over a period of time. This will be monitored on a day-to-day basis but periodically a formal benefits review should be conducted. This will involve a review of change management and benefits management procedures as well as comparison of actual benefits realised against the planned benefits.
Benefits review plan	A PRINCE2 project does not include benefits realisation. It is assumed that this will be performed by a host programme or business as usual. However, the project does have responsibility for planning benefits reviews and this is set out in the benefits review plan.
Benefits tolerance	Tolerance as applied to a benefit. PRINCE2 requires this to be documented in the business case.
Berlo More: – Encyclopaedia	David Berlo set out his theory of communication in 1960[2]. It is also known as the SMCR model because of its four components: source, message, channel and receiver.
Best practice	A term widely used in guides and standards to describe their content. The term is generally accepted as being shorthand for 'best current practice', i.e. if practices were literally 'best' they could not be improved. All 'best practice' evolves and (hopefully) gets better. This term should therefore be taken as the current view of best practice.
Beta distribution More: – Encyclopaedia	A statistical distribution that is commonly used in PERT analysis and Monte Carlo analysis.
Bid	A quotation or proposal, usually made in response to a request for quotation, which offers to enter into a contract for specified price under certain contractual terms and conditions.
Bid analysis	The process of breaking down and assessing a bid. This usually facilitates the comparison of alternative bids. A variety of qualitative and quantitative methods can be used that address aspects of the bid such as value for money and whole life costing.

[2] Berlo, D., (1960), The process of communication: an introduction to theory and practice, Holt, Reinhart and Winston, New York.

Bidder conference

A meeting of prospective suppliers prior to the issue of a tender that ensures all suppliers have a clear, common understanding of the client's requirements.

Blake and Mouton

More:

- Encyclopaedia

Robert Blake and Jane Mouton developed their managerial grid in the early 1960's[3]. They described two dimensions:

- Concern for people indicates the degree to which a leader considers team members' needs, interests and personal development.
- Concern for production indicates the degree to which the leader emphasises objectives, organisational efficiency and productivity.

Within these dimensions they identified five example managerial styles.

Blueprint

More:

- Description

A blueprint is a form of specification. It is applicable to programmes of business change where the ultimate objective is a changed organisation and working methods. The blueprint represents the sum of all outcomes resulting from the outputs of projects and the change activity performed by business-as-usual. The benefits in the business case should be capable of being realised as a result of achieving the blueprint.

Blueprint design and delivery (MSP theme)

This MSP theme deals with the creation and eventual delivery of the programme's blueprint. It explains how the blueprint is developed and maintained throughout the transformational flow.

BOOT

More:

- Encyclopaedia

BOOT is an acronym for build, own, operate, transfer. It is an asset procurement method, typically used by governments.

Border

This term is used in MSP to describe the period towards the end of a tranche when reviews are held and authorisation is given to move to the next tranche.

This is a very different use of the word than that used in PRINCE2 and Praxis where this period is defined as a boundary.

Bottom up estimating

More:

- Encyclopaedia

Initial estimating is usually performed top down. Once the full work breakdown structure (WBS) has been developed, activities listed and resources allocated, detailed bottom up estimating can start.

This involves itemising each component of resource or cost on the lowest level activities and then aggregating these for each element in the WBS.

[3] Blake, R. Mouton J., (1964), The Managerial Grid, Gulf Publishing, Houston.

Boundaries process

More:

- Method
- Competence
- Capability maturity

The delivery phase of smaller projects may not be divided into stages. The delivery phase of more complex projects and all programmes will be divided into stages or tranches respectively.

The initial impression of a boundaries process may be that it all takes place between the end of one stage or tranche and the beginning of the next stage or tranche. In reality it is rarely that clear cut. In programmes, tranches of work often overlap and even in projects where stages are sequential, the boundary activities will span the end of one stage and the beginning of the next.

The process will need to be tailored to suit but the main goals of managing boundaries will always be to:

- conclude a stage or tranche in a structured way;
- prepare for the next tranche or stage.

The equivalent process in PRINCE2 is Managing a Stage Boundary (SB). Neither the PMBoK® guide nor ISO21500 explicitly address boundaries between the stages of a project.

Boundary

In Praxis a boundary is the point of transition between one stage and the next. The boundaries process is also used to guide the closure of one tranche and the mobilisation of the next.

PRINCE2 takes a very similar approach and uses the Managing a Stage Boundary (SB) to guide the boundaries between stages.

MSP uses the term in a very different way. In this case the boundary extends to the full scope of a programme including the extent of its influence and authority.

Brainstorming

The unstructured and dynamic generation of ideas by a group of people where anything and everything is acceptable - well almost! Particularly useful in generating a list of possible project risks.

Branching logic

Alternative paths within a probabilistic network.

Breakdown code

A code that represents the 'family tree' of an element in a breakdown structure.

By applying such coding systems to work breakdown structures, organisational breakdown structures and cost breakdown structures, reports can be produced for just about any element of a project by referring to the relevant codes.

Breakdown structure

More:

- Encyclopaedia

A breakdown structure is a hierarchy of components of some aspect of a project, programme or portfolio.

Examples include: cost breakdown structure (CBS), organisational breakdown structure (OBS), product breakdown structure (PBS) and work breakdown structure (WBS).

Brief

More:

- Description

The project or programme brief is created by the identification process and is one of the documents submitted to the sponsor to seek approval to start the definition process.

During the definition process each section of the brief will be used as a basis for development of multiple specialist documents. The version of the brief used for authorisation will then be archived.

PRINCE2 also calls this document the project brief and MSP calls it the programme brief.

In the PMBoK® guide and ISO21500 the project charter has very similar content.

Budget

A budget is a quantitative statement of resources (usually monetary) required to achieve a particular objective. Typical within the project environment would be the overall project budget, phase budgets and stage budgets. In the programme environment there may also be tranche budgets.

Budget at completion (BAC)

An earned value management term for the total authorised budget for a project. This is equal to all allocated budgets and any as yet undistributed budgets (e.g. change budget or contingency reserve). Management reserves are not included.

Budget cost of work performed (BCWP)

More:

- Encyclopaedia

In earned value management this is the value of work done by a specified date where the value is calculated according to the actual work performed and the original budget costs. It also includes the applicable portion of apportioned effort (overheads).

Also known as earned value.

Budget cost of work scheduled (BCWS)

More:

- Encyclopaedia

In earned value management this is the value of work that should have been completed by a specified date according to the baseline schedule and budgets. This includes an applicable portion of apportioned effort (overheads).

Sometimes referred to simply as planned value.

Budgeting and cost control

More:

- Knowledge
- Competence
- Capability maturity
- Resources

A Praxis function that includes the detailed estimation of costs, the setting of agreed budgets and control of costs against that budget. Its goals are to:

- determine the income and expenditure profiles for the work;
- develop budgets and align with funding;
- implement systems to manage income and expenditure.

Also a function in the APM BoK.

In the PMBoK® guide these aspects are covered by the project cost management knowledge area and in ISO21500 by the cost subject group

PRINCE2 does not have a theme dedicated to financial matters but these are mentioned in the plans theme and progress theme.

Buffer

More:

- Encyclopaedia

A reserve of time added to a network diagram in the critical chain technique. A buffer on the critical chain is a project buffer and one applied to a non-critical chain is a feeder buffer.

Burden

Overhead expenses added to direct costs to represent the overhead costs of the host organisation that should be allocated to the project.

Burn chart

A chart that shows the number of story points on the vertical scale and time on the horizontal scale.

If the chart shows story points completed it is called a burn up chart. If it shows the story points yet to do, it is called a burn down chart.

Burn down chart

More:

- Encyclopaedia

A burn down chart is a graphical plot of work remaining against time. The simple psychology of the chart is that it focuses the mind on what is left to do rather than what has been achieved. While an appreciation of what has been done creates feelings of satisfaction, an appreciation of what is left to do creates a feeling of urgency.

See also burn up chart.

Burn up chart

A burn up chart is a graphical plot of work completed against time. It is typically used in agile to show story points completed.

See also burn down chart.

Burst event

An event in an activity on arrow network that has more than one activity emerging from it.

Business ambassador	A role in DSDM (Dynamic Systems Development Method) that is the main role with responsibility to promote understanding of the business view of a project.
Business as usual	Projects and programmes are temporary constructs that deliver a set of objectives that are implemented by the more permanent operational parts of an organisation. The term business as usual (often reduced to BAU) is used to refer to these permanent operations to distinguish them from projects and programmes.
Business case	PRINCE2, MSP and the APM BoK all have a chapter dedicated to the management of the business case document. In Praxis the equivalent topic is termed business case management to distinguish it from the document of the same name. The PMBoK® guide and ISO21500 both refer to the business case but do not have sections dedicated to it.
Business case (document) More: – Description	The business case is the central document to a project or programme life cycle. The reason for defining a life cycle with phases, tranches and/or stages is to enable go/no go decisions to be made that prevent wasted investment. These decisions are primarily made based on the viability, achievability and desirability of the business case.
Business case management More: – Knowledge – Competence – Capability maturity – Resources	Business case management is the function concerned with developing, communicating and maintaining the business case. Its goals are to: • summarise context and delivery in a single document; • explain the desirability, achievability and viability of the proposed work; • develop the primary document that will be used to support a 'go/no go' decision at all gates in the life cycle; • update and maintain the business case throughout the life cycle. The equivalent chapters in PRINCE2 and the APM BoK are simply called business case. In MSP the relevant chapter is called *the* business case. Both the PMBoK® guide and ISO21500 mention the business case and include it as an input to the creation of the project charter, but they do not have dedicated sections.

Business change authority	A term used in MSP for an individual who represents a group of business change managers.
Business change management	In many instances, for a project output to produce benefits, there needs to be business change. People and organisations are often resistant to change and the danger is that expensive project deliverables are not effectively used. Business change management is the work involved in managing people through a period of change and embedding that change so that it becomes the normal way of working.
Business Change Manager	The role that is responsible for the management of change and realisation of benefits.
Business change team	A team of change management specialists, led by a business change manager, who implement change to business-as-usual.
Buyer	A PMBoK® guide term for the person who acquires products or services in the project procurement management processes.
C/Spec	A colloquial abbreviation for cost/schedule control systems criteria.
Calendar	Critical path analysis uses units of time (usually days) to calculate start and finish times for the activities in a network. The day numbers need to be translated into dates for presentation of meaningful information. This requires knowledge of the normal working week and any special non-working days. This information is held in a calendar. Most computer planning packages allow a variety of calendars to be defined. The default is usually an overall project calendar with specialist activity calendars and resource calendars being used to indicate working patterns for particular activities or resources.
Capability	The most common use of this term is within the context of capability maturity. However, MSP defines it as a completed set of project outputs required to deliver an outcome.

Capability maturity

More:

- Knowledge
- Resources
- Model

Capability and maturity are usually represented as a model against which an organisation's performance can be measured and improved. Usually referred to as capability maturity models, they describe the essential elements of effective processes and work on the premise that the quality of a system or product is highly influenced by the quality of the process used to develop it.

The goals of capability and maturity management are to:

- assess the ability of an organisation to perform P3 management effectively and efficiently;
- identify how the organisation can improve its P3 management;
- promote the improvement of P3 management against an independent standard.

This is covered in the APM BoK in the function success factors and maturity.

The publishers of PRINCE2 and the PMBoK® guide cover capability maturity in separate documents. The Axelos publication is P3M3 (project, programme and portfolio management maturity model) and the Project Management Institute's publication is OPM3 (organisational project management maturity model).

Capacity planning

More:

- Encyclopaedia

The term capacity planning means different things to people in different environments. Two things are common regardless of the detailed approach:

- Capacity is the maximum amount of work that an organisation is capable of completing in a given amount of time.
- Capacity = (amount of resource) x (utilisation) x (efficiency).

The key thing about capacity management in the context of P3 management is that projects and programmes are transient so flexibility in capacity is important. Many quantitative approaches to capacity management are designed for production engineering or computer systems.

Capital costs

Costs expended on capital investment as opposed to those expended on operational resources.

Capture and examine issues and risks

An activity from the PRINCE2 Controlling a Stage (CS) process.

During a stage issues and risks will arise. This PRINCE2 activity is a simple one that notes the collection of issues and risks, and records them in the issue register and risk register respectively. It also produces issue reports as required. The examination of risks is conducted according to the procedure in the risk theme.

In Praxis the capture and documentation of issues is covered in various activities, often focusing on the sponsorship process since that is mainly where issues are resolved. The capture and assessment of risks is covered by the risk management procedure.

In the PMBoK® guide the issue log is an output of two stakeholder processes indicating that issues tend to arise from stakeholders. Risks are identified and analysed using the project risk management processes.

In ISO21500 the issues log is an output of Direct project work. Risks are identified and assessed using the processes in the risk subject group.

Capture previous lessons

An activity from the PRINCE2 Starting up a Project (SU) process.

All projects and programmes should learn from previous projects and programmes. PRINCE2 formalises this in the capture previous lessons activity which is the first to be done after the project manager is appointed.

The equivalent in Praxis is the *review previous lessons* activity in the identification process.

In the PMBoK® guide lessons learned are part of organisational process assets which are an input to the Develop Project Charter process.

ISO21500 lists lessons learned from previous projects as an input to Develop project plans.

Carnall

More:

- Encyclopaedia

Colin Carnall's book 'Managing Change in Organisations' was first published in 1990[4]. In it he proposed a model that focuses on the role of the manager during the process of change.

In the P3 environment, the pressure for change creates the need for a project or programme and the 'manager' (in the context of Carnall's model) is primarily the business change manager (BCM).

Dealing with organisational cultures and managing organisational politics are clearly functions that the BCM (with support of other members of the project/programme team) needs to build into stakeholder management while managing the transition as part of benefits realisation.

Cascade chart

A form of Gantt chart where the activities are listed vertically such that their predecessors are always higher in the list.

This has the effect of placing the earliest activities in the top left hand corner of the chart and the latest in the bottom right hand corner.

Cash flow

Cash inflow is the money received by the project or programme and cash outflow is the money paid. The combination of receipts and payments against time is a cash flow that is usually presented as an s-curve.

Categorise

A phase in the APM BoK portfolio life cycle where the component projects and programmes are classified and grouped according to certain shared characteristics such as the strategic objectives with which they align.

Also an activity in the Praxis portfolio management process.

Cause and effect diagram

See Ishikawa diagram.

Centre of excellence

A body that promotes consistency of methods, knowledge management, assurance and training. The same functions may be performed by a PMO.

Champion

An alternative name for the role of sponsor.

[4] Carnall, C., (2007), Managing Change In Organisations, Prentice Hall, London.

Change (PRINCE2 theme)	The change theme in PRINCE2 is concerned with change control and configuration management. Note: it does not address change management. Praxis covers this in the change control and configuration management functions and their component procedures. ISO21500 addresses this through a single process (Control scope) in the Scope subject group. The PMBoK® guide similarly has the process Control Scope in the project scope management knowledge area.
Change authority	A group that has responsibility for assessing change requests.
Change budget	All projects and programmes are subject to requests to change the specification. Change requests come from a variety of sources but mainly from those who will be the ultimate users of whatever the project is intended to produce. Even though changes are inevitable, surprisingly few projects have the foresight to allocate a change budget which is simply a budget allocated to pay for authorised change requests.
Change control More: – Knowledge – Competence – Capability maturity – Resources	Change control is the means by which all requests to change a scope baseline are captured, evaluated and then approved or rejected. Its goals are to: • capture stakeholders' requests to make changes to scope; • ensure that requests are only approved if viable and achievable; • integrate changes into the existing scope.
Change control board	A group of stakeholders who consider change requests. They normally have the authority to approve changes that are funded from an agreed change budget. PRINCE2 refers to this body as the change authority.
Change freeze	A point after which no further change requests will be considered.
Change log	The change log records all change requests and their progress through the change control procedure.

Change management More: – Knowledge – Competence – Capability maturity – Resources	The achievement of benefits in a business case often requires changes to the working practices of the host organisation. These changed practices are known as outcomes and moving from the current practice to the desired outcome is achieved through change management. Outcomes usually involve a section of the organisation adopting and utilising the outputs of one or more projects. The goals of change management are to: • define the organisational change required to convert outputs into benefits; • ensure the organisation is prepared to implement change; • implement the change and embed it into organisational practice. The APM BoK also has a function for change management. Neither the PMBoK® guide, ISO21500 nor PRINCE2 cover change management.
Change management plan More: – Description – Templates	The effective management of change is vital in order to generate benefits from outputs. Changes to business as usual will be included in the scope of most projects, programmes and portfolios. There will always be resistance to change and implementing a clearly documented and consistent approach contributes to dealing with this resistance.
Change manager	A role in MSP that reports to a Business Change Manager and is usually focused on a single benefit.
Change order	An authorisation to make a change, including a change of scope or agreement to accept a design solution that is outside the agreed cost parameters.
Change register	Sometimes used in the same way as change log (i.e. a list of all change requests) but sometimes this refers to a register of approved changes.
Change request	A formal request to make a change to a baseline that triggers the change control procedure.
Change team	Although a business change manager has responsibility for implementing change to achieve a particular benefit, they may need the support of a change team to perform all the transformation and benefits realisation work.

Charter

There are two very different definitions for this term.

In the PMBoK® guide and ISO21500 the project charter is a document that gives the project manager authority to apply resources to the project.

In the UK it may refer to a Royal Charter that is awarded to professional bodies such as the APM and places obligations upon them to promote a profession in the public interest.

Check list model

Check list models use data, typically from post project reviews or post programme reviews, to build a model of the effects of broad categories of risk. The degree to which a risk event typically occurs is indicated with a factor on a numeric scale.

Weighting is applied to indicate to what extent the current project or programme is sensitive to the risk (within the limits defined in the model).

Finally, the factor and weighting are multiplied to give a score indicating the most significant areas of risk that should be examined.

Checkpoint

A PRINCE2 term that refers to a point at which an event-driven review will be performed.

Checkpoint Report

A PRINCE2 term used to describe the report produced by the project team at a checkpoint. Its format is defined at the time that the work package is agreed and provides progress information on the products within the work package.

This report is given to the project manager by the team.

Cialdini

More:

- Encyclopaedia

Robert Cialdini set out his 'six principles of influence' in his book 'Influence: the Psychology of Persuasion'[5]. He identified these by observing the behaviours of people in sales, advertising, fund raising etc. to see how these experienced professionals influenced their target audience.

Influencing is a key skill for both P3 managers and sponsors. The 'assess' step in the stakeholder management procedure will identify key stakeholders who have the potential to impact the work. The P3 manager and sponsor usually do not have authority over these stakeholders and must use influencing skills to gain support for the work.

[5] Cialdini, R. B., (1995), Influence: the Psychology of Persuasion, Quill, New York.

Claim	A request by a supplier for additional payments. This usually arises as a result of change requests but in some cases it can turn into a dispute about costs incurred due to incorrect application of the contract.
Class of service	In PRINCE2 Agile this is a broadly defined category for different types of work. Different classes of service are typically associated with qualitatively different risk profiles, especially with regard to schedule risk and the cost of delay. Four generic classes of service are widely recognized: 'standard', 'fixed date', 'expedite' and 'intangible'.
Client	The individual or organisation that commissions the project and will pay for it on handover of the completed output. Referred to as the customer in PRINCE2.
Close Procurements (12.4)	A PMBoK® guide process that brings contractual arrangements to an end including the settlement of claims and finalisation of contract documentation. The equivalent in Praxis is the *conclude* step in the contract management procedure, which would be performed during the *demobilise* activity of the closure process. PRINCE2 doesn't cover procurement in detail but this work could be considered implicit in the hand over products activity in the Closing a Project (CP) process. In ISO21500 the completed procurements are an output of Close project phase or project.
Close Project or Phase (4.6)	This PMBoK® guide process is used to close down a phase of a project or the entire project. It is equally applicable to projects that have reached their natural conclusion or have been prematurely closed. This process plans the administrative and contract closure procedures and the activities needed to complete handover of the finished project deliverables. If the project has been terminated prematurely, then this process should investigate and document the causes and actions taken. In Praxis this work is covered by the activities in the closure process. The equivalent in PRINCE2 is the Closing a Project (CP) process and in ISO21500 it is Close project phase or project.

Close project phase or project (4.3.7)

This ISO21500 process is used to close down a phase of a project or the entire project. It is equally applicable to projects that have reached their natural conclusion or have been prematurely closed.

This process verifies that the deliverables of the project or phase have been completed and all processes have been completed or terminated.

In Praxis this work is covered by the activities in the closure process.

The equivalent in PRINCE2 is the Closing a Project (CP) process and in the PMBoK® guide it is Close Project or Phase.

Closing (ISO 21500 process group)

The ISO21500 closing group comprises two processes.

It is very similar in scope to the closure process in Praxis, the Closing a Project (CP) process in PRINCE2 and the closing process group in the PMBoK® guide.

Closing a Programme (MSP)

The final process in the MSP transformational flow which covers all the activities involved in closing a programme.

Key elements of this process are:

- Demobilising the programme organisation
- Reviewing the programme
- Ensure support is in place for post-programme benefits realisation activities
- Ensure governance is in place for any remaining projects

The equivalent in Praxis is the closure process.

Closing a Project (CP)

The PRINCE2 process that covers all the activities involved in closing a project, including the development of plans for any follow-on actions and post-project review.

The various outputs of the CP activities are all submitted to the Project Board who formally approve closure of the project and issue a project closure notification to the necessary parties.

The equivalent in Praxis is the closure process.

In the PMBoK® guide this is covered by the processes in the closing process group and in ISO21500 by the processes in the process group called simply closing.

Closing process group

This PMBoK® guide process group contains two processes.

It is very similar in scope to the closure process in Praxis, the Closing a Project (CP) process in PRINCE2 and the closing process group in ISO21500.

Closure notification

In PRINCE2 this is a communication from the project board to all stakeholders the project is being closed. This is a trigger for demobilisation.

Closure process

More:

- Process
- Competence
- Capability maturity

This Praxis process manages the closure phase of the project or programme life cycle.

The goals of this process are to:

- close a project or programme that has delivered all its outputs;
- close a project or programme that is no longer justifiable;
- review the management of the work and learn lessons.

Note that the first goal does not identify closure as being when the objectives are complete. Objectives may be described as outputs, outcomes or benefits and these are all achieved at different times. Closure is principally concerned with a temporary organisation handing over responsibility for its objectives and disbanding. Where that occurs in the life cycle will depend on how the project or programme was constituted in the first place.

The equivalent in PRINCE2 is the Closing a Project (CP) process.

In the PMBoK® guide this is covered by the processes in the closing process group and in ISO21500 by the processes in the process group called simply closing.

Closure recommendation

In PRINCE2 this is a recommendation from the project manager to the project board that the project be closed. If the board are satisfied that the project can be closed they will send out a closure notification.

This recommendation results from the work done in the recommend project closure activity in the Closing a Project (CP) process.

COCOMO	The COnstructive COst MOdel is a software estimating technique that uses estimates of lines of code adjusted by several environmental factors such as: • level of complexity; • project size; • required reliability; • levels of ability of team members. The COCOMO algorithms convert the lines of code into effort based on the environmental factors.
Cohen and Bradford More: – Encyclopaedia	Alan Cohen and David Bradford created a six step influencing model for their book 'Influence Without Authority'[6]. The overriding principle is that influence is gained through 'give and take'.
Collaborative negotiation	A form of negotiation that seeks to create scenario where all parties involved get part or all of what they were looking for from the negotiation.
Collect lessons learned (4.3.8)	This ISO21500 process is part of the closing process group and initially gives the impression that all lessons learned are documented at the end of the project. This is not the case and ISO21500 itself says "at some level lessons learned may be outputs of every project management process". This process is simply a focus for collating and publishing the lessons learned from throughout the project. Praxis and PRINCE2 similarly maintain a lessons log throughout the project. This is formally reviewed at the end of each stage and again at the end of the project. In the PMBoK® guide lessons learned form part of the organisational process assets and therefore will be updated whenever these are an output of a process.

[6] Cohen, Allan R., and Bradford, David L., (2005), Influence Without Authority, Wiley, Hoboken, New Jersey.

Collect requirements (5.2)

This PMBoK® guide process is concerned with capturing stakeholder wants and needs in order to establish project objectives and scope.

The equivalent in Praxis is the combination of the requirements management procedure and the solutions development procedure.

PRINCE2 deals with requirements capture mainly through its approach to product-based planning. Some aspects of solutions development are covered by the preparation of the project approach as covered by part of the activity called Select the project approach and assemble the Project Brief.

The nearest equivalent in ISO21500 is Define scope.

Commissioning

The commissioning process takes an inactive system and activates it to achieve defined operational standards.

Committed costs

Costs to which the project or programme is contractually obliged to pay, regardless of whether the product or service has actually been delivered or invoiced.

Committed expenditure

See committed costs.

Communication

More:

- Knowledge
- Competence
- Resources

Communication is the means by which information is exchanged and a common understanding achieved. Its goals are to:

- impart relevant information;
- ensure the information is understood.

In the P3 environment these basic goals are a means to:

- ensuring that members of the management team understand the objectives and their role in achieving them;
- building relationships with stakeholders;
- minimising conflict by avoiding misunderstandings;
- developing confidence and trust;
- maintaining the commitment of stakeholders and team members;
- effective control of the work throughout the life cycle.

In the PMBoK® guide this is covered in the tools and techniques section of the Plan Communications Management process.

ISO21500 and PRINCE2 do not go into detail on models of communication. MSP provides some information on communication in its Leadership and stakeholder engagement theme.

Communication (ISO21500 subject group)

An ISO21500 subject group that provides a set of processes for managing procurement. The processes comprise:

- Plan communications.
- Distribute information.
- Manage communications.

In Praxis, the principles of communication are covered in the communication function; the practicalities of communication are covered in information management and the key function of communicating with stakeholders is covered in stakeholder management.

PRINCE2 doesn't have a specific communications theme but covers the subject in areas such as organisation and the activities in the PRINCE2 Processes.

The PMBoK® guide and ISO21500 share a very similar structure and the nearest equivalent in the PMBoK® guide is project communication management knowledge area; in ISO21500 it is the communication subject group.

Communication management plan

The PMBoK® guide document that describes the means by which communication with the project's stakeholders will be planned, structured, monitored and controlled.

In Praxis, this information is contained in the stakeholder management plan. The closest equivalent (although less comprehensive) in PRINCE2 is the communications management strategy. In ISO21500 much of this information will be in a section of the project management plan.

Communication management strategy

The PRINCE2 document that describes the means and frequency of communication with the project's stakeholders.

In Praxis, this information is contained in the stakeholder management plan; in the PMBoK® guide it is in the communications management plan and in ISO21500 it is in a section of the project management plan.

Communication plan

In Praxis this is a schedule of communication activities. It is based on the general delivery plan format with the scope being stakeholder communications.

While focusing on the timing of communications, the plan may also include their cost, how they will be controlled and how they link to other delivery plans.

Communities of practice

More:

- Knowledge
- Resources

Communities of practice (CoPs) are groups of people who share an interest in P3 management or an aspect of P3 management. The goals of these communities are to:

- share information that helps individuals to develop their skills,
- help the profession to collectively evolve and improve.

There are three aspects of a community of practice:

- The domain.
- The community.
- The practice.

Communities of practice is also a function in the APM BoK.

Comparative Estimating

More:

- Encyclopaedia

An estimating technique that compares the current project with similar work and adjustments are made for known differences.

Accuracy can be increased by breaking the project into elements and performing a comparison on those elements. This enables more specific differences between the past projects and the current project to be assessed.

This is sometimes referred to as analogous estimating.

Competence

More:

- Knowledge
- Resources
- Framework

Dictionary definitions of competence are relatively straightforward and are simply concerned with an individual's ability to perform a job or roles successfully. A competent project manager is, therefore, someone who is able to successfully manage a project, a competent programme manager is someone who can successfully manage a programme and so on.

In the context of the Praxis framework, the goals of competence are to:

- define criteria that enable competence to be identified;
- provide a means of integrating functional and process competencies to support capability maturity.

Praxis also contains a full competency framework.

Competency framework

More:

- Framework

A set of competencies that may be used to define a role.

The APM's framework is called simply – the APM Competency Framework.

The corresponding PMI® publication is the Project Manager Competency Development (PMCD) Framework and the corresponding APM document is simply called The APM Competency Framework (often abbreviated to APM CF).

Competitive negotiation	A form of negotiation that is about getting the best deal for one party regardless of the needs and interests of the other(s).
Completion date	The date calculated by which the project could finish following careful estimating, planning and risk analysis taking into account resource limits and contingency.
Complexity More: – Knowledge	Complexity is an indicator of the inter-relationships within a project, programme or portfolio that affect the way it will be managed and the skills needed to manage it. Since all projects, programmes and portfolios are made up of many inter-related functions and processes, they are all, by the dictionary definition, complex. But of course some are more complex than others.
Compound risk	A risk event that comprises a number of inter-related risk event.
Concept	The first phase in the APM BoK project and programme life cycle. The equivalent in Praxis is the identification phase and in PRINCE2 it is the phase managed through the Starting up a Project (SU) process.
Concession	In general usage this term usually refers to an offer made by one party during negotiation, in order to gain a concession in return. In PRINCE2 the term is used to describe an off-specification that is accepted by the project board as not needing corrective action.
Concurrent Engineering	In engineering projects, concurrent engineering shortens timescales by overlapping phases. For example, as soon as sufficient preliminary design work has been done, detailed design work will commence. As soon as sufficient detailed design has been done, procurement will start. It may even be that some fabrication or construction starts before the detailed design is complete. This is an industry specific example of fast tracking.
Conditional logic	See probabilistic dependencies.
Conduct procurements (12.2)	A PMBoK® guide Executing Process that is concerned with obtaining bids from sellers, selecting sellers and awarding contracts. In Praxis these are all covered by steps in the procurement and contract management procedures. The ISO21500 equivalent is Select suppliers. PRINCE2 does not cover this kind of external procurement in any detail.

Configuration	The complete technical description required to build, test, accept, install, operate, maintain and support a system. In this context a 'system' could be an IT system, a building, a ship, a set of organisational processes or any other output of a project or programme.
Configuration audit	An audit to check that the information in the configuration item records are consistent within the configuration library and with any information held by the people or teams producing the configuration items.
Configuration item	A component of a configuration that has a defined function and is designated for configuration management.
Configuration item record	A record that describes the development life cycle of an individual configuration item. It will hold information about links to other items, the owner of the item, version control, cross references to change requests etc.
Configuration Librarian	The person whose job it is to maintain the configuration and operate the configuration management system.
Configuration library	The total set of configuration item records.
Configuration management More: – Knowledge – Competence – Capability maturity	Configuration management encompasses the administrative activities concerned with the creation, maintenance, controlled change and quality control of products. Its goals are to: • identify the products that will be treated as configuration items; • support the assessment of change requests and document the results of change control; • maintain the validity of the configuration and the accuracy of the configuration management system. This is also a function in the APM BoK and is covered by the change theme in PRINCE2. In the PMBoK® guide configuration management is covered in the tools and techniques of Perform Integrated Change Control. ISO21500 makes reference to configuration management but does not describe it.

Configuration management plan

A management plan that describes policies and procedures for managing the configuration items that make up the configuration. Praxis suggests that this will be part of the scope management plan unless the complexity of the configuration requires a separate management plan.

If required, this would be developed during the *prepare governance documents* activity in the definition process.

ISO21500 doesn't explicitly mention a configuration management plan but covers the same content, in general terms, in Develop project plans. Similarly, the PMBoK® guide refers to a configuration management plan as part of the project management plan which is produced in the Develop Project Management Plan process.

In PRINCE2 this document is referred to as the configuration management strategy and is produced by the prepare the configuration management strategy activity in the Initiating a Project (IP) process.

Configuration management strategy

The PRINCE2 term for a configuration management plan.

Conflict management

More:

- Knowledge
- Competence
- Resources

Conflict is most usually perceived as something that is negative and almost invariably having a detrimental impact on the achievement of the project, programme or portfolio objectives. Some aspects of conflict can be used positively and it is important to recognise the difference between conflict management and conflict resolution. The latter is only one aspect of the former.

The goals of conflict management are to:

- utilise the positive aspects of conflict;
- resolve organisational and interpersonal conflict;
- minimise the impact of conflict on objectives.

This is also a topic in the APM BoK.

In the PMBoK® guide conflict management is covered in the tools and techniques of Manage Project Team. ISO21500 makes no reference to conflict management.

Consolidated schedule

A term from the GAO SAG that refers to a consolidation of multiple integrated master schedules. This is effectively a schedule that covers a portfolio of projects.

The guide itself comments that "portfolio schedule and consolidated schedule are often synonymous with integrated master schedule.

Constraint dates	See imposed dates.
Constraints	Restrictions or limitations that apply to a project, programme, stage, work package etc. This could range from legal or regulatory constraints to time and cost limits. In the context of network diagrams, this is often used as a generic term for factors affecting the possible start and finish dates of an activity including dependencies, imposed dates and resource limits.
Consult	The term referenced by the 'C' in RACI. It indicates a need to give individuals or groups a chance to comment and make recommendations on a document or action.
Consumable resource	The most common resources are re-usable i.e. people and machinery. Some computer packages allow definition of consumable resources e.g. materials. This allows a crude form of stock control to be built into the schedule. As the activities which use the materials are progressed, the amount available will decrease and reports can be produced that trigger re-ordering.
Context More: – Knowledge	The P3 management context has two aspects that can be likened to nature and nurture, i.e. the initial conditions that define the natural characteristics of the work and the actions that are then taken to manage it. The nature aspect is referred to as the setting. The nurture aspect is covered in governance and professionalism. The APM BoK has a very similar contextual foundation.
Contingency	A term used to describe delivery plans or budgets that are prepared to deal with risk events should they actually occur. The APM PSMC uses the term to refer to a contingency reserve. See also contingency plan.
Contingency allowance	See contingency reserve.
Contingency budget	See contingency reserve.
Contingency plan	An alternative delivery plan designed to be implemented should a specified risk event occur. Sometimes referred to as a fallback plan.

Contingency planning	The process of developing contingency plans to cover risk events not addressed by other means.
Contingency reserve	A sum of money or time that is included in a budget (and therefore the business case) to deal with any identified risk events that actually occur. The sum of money and time is usually derived from a contingency plan that describes what needs to be done and what resources will be required to deal with the consequences of risk.
Contingent response strategy	The PMBoK® guide term for a contingency plan.
Contract	A mutually binding agreement between two or more parties. In the P3 environment this is usually between a seller or supplier (who is obligated to provide a specified product) and a buyer or customer (who is obligated to pay for it).
Contract management More: – Knowledge – Competence – Capability maturity	Contract management includes the negotiation, creation and administration of a contract between two or more parties. Its goals are to: • support procurement by negotiating terms and conditions; • document contractual agreements; • monitor contractual performance; • conclude contracts. The APM BoK has a function called provider selection and management although this focuses more on the selection than the management. The equivalent in the PMBoK® guide is the tools and techniques contained in the Control Procurements process. In ISO21500 this is known as Administer procurements.
Contract management plan	A statement of how contractual relationships will be managed in a project, programme or portfolio. It must reflect the terms of the contract and highlight key controls such as audits and performance reviews.

Control

More:

- Knowledge
- Competence
- Capability maturity
- Resources

Control involves monitoring performance against approved baselines, updating delivery documents and taking corrective action as necessary. Control is required throughout the life cycle but this explanation is primarily aimed at controlling the delivery process.

The goals of control are to:

- review performance against baselines;
- evaluate the effect of actual performance on future plans;
- take action as required to achieve planning targets or agree revised targets.

This is also a function in the APM BoK. The equivalent in PRINCE2 is the progress theme.

Control changes (4.3.6)

Change control is often used just in relation to changes to the scope of a project. This ISO21500 process takes a broader view and deals with any request to modify any aspect of the project.

In the PMBoK® guide the equivalent process is Perform integrated Change Control.

In Praxis the change control function is focused on scope change control, albeit that requests to change scope impact many other aspects of the project. The fully integrated approach comprises change control, the more general control function and the delivery process.

In PRINCE2 the change theme and Controlling a Stage (CS) process achieve the same ends.

Control charts

Charts used to graphically show actual performance against time. Products are sampled and inspected. The chosen performance criterion is plotted against time in order to identify potential problems with the production process. Products exceeding the control limits would trigger a closer inspection of the process. See also RAG reports.

Control Communications (10.3)	A PMBoK® guide process concerned with monitoring and controlling communications throughout the project organisation. In Praxis this area is covered by the information management and stakeholder management procedures. There is not a single equivalent in ISO21500. It would be more accurate to say that the Distribute information and Manage communications collectively cover the same ground as the PMBoK® guide processes Manage Communications and Control Communications. (Note: when drawing comparisons it is somewhat confusing that Manage Communications is an Executing Process in the PMBoK® guide and the process of the same name in ISO21500 is a Controlling process) PRINCE2 doesn't have a specific theme for communication and addresses this area primarily through the description of stakeholder engagement in the organization theme.
Control costs (4.3.27)	An ISO21500 process focused on the collation of information related to expenditure, calculating actual costs, preparing forecasts and taking corrective action as required. Praxis covers this area in the budgeting and cost control function and the *co-ordinate and monitor progress* activity in the delivery process. The equivalent process in the PMBoK® guide is Control Costs. PRINCE2 doesn't have dedicated cost control procedures or processes and this area should be considered implicit in the review the stage status and review work package status activities in the Controlling a Stage (CS) process.
Control Costs (7.4)	A PMBoK® guide process focused on the collation of information related to expenditure, calculating actual costs, preparing forecasts and taking corrective action as required. Praxis covers this area in the budgeting and cost control function and the *co-ordinate and monitor progress* activity in the delivery process. The equivalent process in ISO21500 is Control costs. PRINCE2 doesn't have dedicated cost control procedures or processes and this area should be considered implicit in the review the stage status and review Work Package status activities in the Controlling a Stage (CS) process.

Control limits	Upper and lower control limits on a control chart are used to identify where a process needs to be checked. The control limit is closer to the mean than the specification limit and is used to warn of a process going out of control rather than identifying a product that has failed its quality control inspection.
Control management plan More: – Description – Templates	Control is one of the central functions of project, programme and portfolio management. It is concerned with performing work in accordance with delivery documents and updating them based on actual progress. A control management plan describes how control should be performed and is particularly important in programmes and portfolios where it ensures that progress information from component projects and programmes is consistent.
Control Procurements (12.3)	This PMBoK® guide process deals with the management of relationships with contracted suppliers. It monitors the performance of both the buyer and the seller and may generate requests to make changes to contracts if appropriate. The equivalent in ISO21500 is Administer procurements. In Praxis the nearest equivalent is the *monitor* step in the contract management procedure which works in conjunction with the control function and the delivery process. PRINCE2 does not contain processes that explicitly deal with external contracts although the role of the senior supplier in the organisation structure is relevant. Controlling contracts should be seen as implicit in other control functions.
Control project work (4.3.5)	This is the high level integration process in ISO21500 that co-ordinates performance information from the more detailed processes in the controlling process group. In the PMBoK® guide the equivalent process is Monitor and Control Project Work. PRINCE2 defines processes that manage the delivery of the project in a different way. At a broad level a combination of the Direct project work and Control project work processes from ISO21500 is equivalent to the Controlling a Stage (CS) and Managing Product Delivery (MP) processes in PRINCE2. Praxis takes a similar approach to PRINCE2 and the corresponding combination is formed of the delivery and development processes.

Control Quality (8.3)

This PMBoK® guide process monitors and records the results of activities that assess performance. This applies to both the outputs of the project and the processes used to manage their delivery. It is conducted in accordance with the quality management plan.

The equivalent in ISO21500 is Perform quality control.

The Praxis approach sees quality as inherent in all aspects of P3 management rather than a separate topic. Therefore, all references to control (whether they refer to outputs or processes) are manifestations of quality control.

In PRINCE2 quality control is covered by a series of steps in the 'quality audit trail' in the quality theme.

Control resources (4.3.19)

This ISO21500 process ensures that the resources required to undertake the project are available and assigned as necessary. Where necessary it will trigger corrective action or change requests.

Given that Administer procurements deals with external suppliers it is fair to assume that this process focuses on internal resources in which case there is no direct PMBoK® guide equivalent.

The equivalent in Praxis is the *maintain* step in the mobilisation procedure.

In PRINCE2 it is the progress theme as applied by the review the stage status activity in the Controlling a Stage (CS) process.

Control Risks (11.6)

This process from the PMBoK® guide deals with the implementation of risk responses. It covers the tracking of risk events, monitoring residual risks and identifying new risks (and therefore overlaps to some extent with Identify Risks). It is also concerned with evaluating the effectiveness of risk processes.

The nearest equivalent in Praxis is the *implement responses* step in the risk management procedure although, because of the overlap, elements of other steps are also relevant.

ISO21500's corresponding process is Control risks.

This aspect of risk in PRINCE2 is primarily covered by the *implement* step of the risk management procedure in the risk theme.

Control risks (4.3.31)

This process from ISO21500's deals with the implementation of risk responses. It covers the tracking of risk events, monitoring residual risks and identifying new risks (and therefore overlaps to some extent with Identify risks). It is also concerned with evaluating the effectiveness of risk processes.

The nearest equivalent in Praxis is the *implement responses* step in the risk management procedure although, because of the overlap, elements of other steps are also relevant.

The PMBoK® guide's corresponding process is Control Risks.

This aspect of risk in PRINCE2 is primarily covered by the *implement* step of the risk management procedure in the risk theme.

Control schedule (4.3.14)

This is the ISO21500 process that monitors the status of activities, updates schedules and manages changes to the baseline.

The equivalent in Praxis is the control function as applied by the *update and communicate* activity in the delivery process.

In PRINCE2 it is the progress theme as applied by the review the stage status activity in the Controlling a Stage (CS) process.

The equivalent in the PMBoK® guide is Control Schedule.

Control Schedule (6.7)

This is the PMBoK® guide process that monitors the status of activities, updates schedules and manages changes to the baseline.

The equivalent in Praxis is the control function as applied by the *update and communicate* activity in the delivery process.

In PRINCE2 it is the progress theme as applied by the review the stage status activity in the Controlling a Stage (CS) process.

The equivalent in ISO21500 is Control schedule.

Control scope (4.3.14)

This is the ISO21500 process that operates change control in the context of the project's scope. It works in parallel with other control processes such as Control schedule and Control cost, which are all co-ordinated under the umbrella of Control changes.

The equivalent in Praxis is the change control procedure and in PRINCE2 it is the procedure in the change theme.

The equivalent in the PMBoK® guide is Control Scope.

Control Scope (5.6)

This is the PMBoK® guide process that operates change control in the context of the project's scope. It works in parallel with other control processes such as Control Schedule and Control Cost, which are all co-ordinated under the umbrella of Perform Integrated Change Control.

The equivalent in Praxis is the change control procedure and in PRINCE2 it is the procedure in the change theme.

The equivalent in ISO21500 is Control scope.

Control Stakeholder Engagement (13.4)

This is the PMBoK® guide process that monitors stakeholder relationships and adjust plans as necessary.

This area is covered in Praxis by a combination of the stakeholder management procedure and the control function.

In PRINCE2 all aspects of stakeholder management are covered in the organization theme.

ISO21500 does not have a controlling process for stakeholder management.

Controlling (ISO21500)

An ISO21500 process group that includes the processes involved in tracking progress and taking corrective action where necessary. These processes can be applied at different levels with the project, i.e. for the project as a whole or for a stage or sub-project.

When viewed from the perspective of the project life cycle, these processes are covered in Praxis by the delivery process and development process.

In PRINCE2 the corresponding process at the project life cycle level is Controlling a Stage (CS) and Managing Product Delivery (MP).

The equivalent in the PMBoK® guide is the Monitoring and Controlling process group.

Controlling a Stage (CS)

This PRINCE2 process manages the delivery phase of the life cycle one stage at a time. Its purpose is to delegate and monitor work, deal with issues and report progress to the project board. It also takes corrective action as required in order to keep the work within agreed tolerances.

The equivalent in Praxis is the delivery process.

In the PMBoK® guide there are three processes that together broadly cover the same area, although the PMBoK® guide does not require delivery to be managed in stages.

- Direct and Manage Project Work.
- Monitor and Control Project Work.
- Perform Integrated Change Control.

Similarly, in ISO21500 this area is covered by:

- Direct project work.
- Control project work.
- Control changes.

Co-ordination matrix

See weak matrix.

Co-ordination process

More:

- Method
- Competence
- Maturity

This Praxis process manages the co-ordination of project and programmes within a portfolio.

While the management process shapes and adjusts the portfolio, this process deals with the day-to-day co-ordination of its component projects and programmes. The two processes are closely aligned. While the management process sets parameters within which the co-ordination is performed, the information produced by the co-ordination will inform the on-going prioritisation and balancing.

The goals of this process are to:

- consolidate information from the component projects and programmes to understand the portfolio as a whole;
- monitor the performance of the portfolio against its objectives;
- manage the inter-relationships between projects and programmes.

At any given point in time, the portfolio will contain inter-related projects and programmes at all stages of the life cycle. In reality, the co-ordination involves projects in definition, programmes in delivery, projects in closure and programmes in identification etc.

Corporate or programme management	The PRINCE2 organisation structure identifies the ultimate originator of a project as corporate or programme management. This reflects the fact that some projects are stand-alone (and therefore report directly to corporate management) whilst some are part of a programme (and therefore report into a programme organisation). The term appears in many PRINCE2 processes to show the origination of documents such as a project mandate or where issues need to be escalated above the project board.
Corporate or programme standards	PRINCE2 often refers to these as the over-arching standards that the project must adhere to. They are typically the basis of project controls and the four PRINCE2 management strategies, i.e. the: • Communication management strategy. • Configuration management strategy. • Quality management strategy. • Risk management strategy. The PMBoK® guide refers to these corporate standards as organisational process assets.
Corporate portfolio	A term used in MSP to refer to the portfolio of the entire organisation as opposed to departmental or regional portfolios for example.
Corporate portfolio board	In MSP this is the body that has authority to make decisions about the composition and prioritisation of the corporate portfolio.
Corrective action	No project or programme will go exactly according to plan. As progress is monitored there will be deviations from plan and a frequent need to get the project back on track. Corrective action is a broad term covering a range of actions taken to get progress back on target whenever it strays off target. In Praxis, corrective action is an activity within the delivery process. In the PMBoK® guide and ISO21500, it is an output and input of several processes involved in monitoring and controlling a project.

Cost (ISO21500 subject group)

An ISO21500 subject group that provides a set of processes for managing cost. The processes comprise:

- Estimate costs.
- Develop budget.
- Control costs.

The equivalent in Praxis are the financial management functions and their component procedures.

PRINCE2 doesn't have a dedicated section on costs but addresses cost and budgeting issues in many different areas.

The PMBoK® guide and ISO21500 share a very similar structure. The nearest equivalent knowledge area in the PMBoK® guide is project cost management and the nearest equivalent subject group in ISO21500 is cost.

Cost aggregation

The process of aggregating activity cost estimates upwards through the work breakdown structure.

Cost baseline

The costs as authorised at the outset of the project or programme. These baseline costs will form the basis of progress reporting using techniques such as earned value management.

Often used synonymously with the term budget.

Cost breakdown structure

A hierarchical breakdown of costs into categories that allow cost reporting to be done by any category within the structure.

When used in conjunction with other breakdown structures, reports can be produced for any combination of elements in the project, programme or portfolio.

Cost centre

A person, department, location, activity or any combination of these used for the allocation and management of costs.

Cost code

A breakdown code for types of cost in a cost breakdown structure.

Cost curve

A graph plotted against a horizontal time scale and cumulative cost vertical scale. This is commonly produced when the project baseline is set to indicate planned expenditure. It can be used to track actual cost against planned cost and could be used to show the effect of income as well as expenditure.

Cost envelope

A cost envelope can be developed by combining a cost curve based upon the earliest start dates of activities with a cost curve based upon their latest start dates. The area between the curves is the cost envelope.

Cost estimating relationships

Correlations between the factors that drive costs and other parameters such as size, design or performance. Once established, these correlations can be used in parametric estimating.

Cost management plan

In both the PMBoK® guide and ISO21500 this is a component of the project management plan that describes how project costs will be planned, structured and controlled.

The nearest equivalent in Praxis is the finance management plan which deals with funding as well as expenditure.

PRINCE2 does not have a specific cost management plan but this information would be part of the project initiation documentation.

Cost performance index (CPI)

More:

- Encyclopaedia

An earned value management term which indicates the financial performance of the project. It is the ratio of the value of work performed to the actual cost of work performed and is given by the formula

Cost performance index = budget cost of work performed ÷ actual cost of work performed

An index of less than 1 indicates that the project is performing worse than planned in financial terms. An index of more than 1 indicates that it is performing better. Indices have the advantage over variances of being independent of the overall size of the project.

Cost plus fee

A payment method where the customer pays the supplier's costs plus a fee for performing the work. The fee structure can take a variety of forms including:

- Cost plus fixed fee.
- Cost plus percentage fee.
- Cost plus incentive fee.

In any form of 'cost plus' contract the bulk of the risk lies with the customer. There is little or no incentive for the supplier to keep costs down since their costs are simply reimbursed and a fee added.

Once common in the defence sector, this type of pricing is increasingly rare. It may be applied to small projects or sub-projects where it is not possible, or impractical, to provide a detailed specification on which a better defined pricing arrangement can be based.

Cost plus fixed fee	A form of cost plus fee pricing where the supplier's costs are reimbursed and an agreed fixed fee is paid on satisfactory completion of the project or milestones within the project.
Cost plus incentive fee	A form of cost plus fee pricing where the supplier's costs are reimbursed. An agreed fixed fee is paid on satisfactory completion of the project or milestones within the project and in addition, an incentive is paid based upon achieving certain performance targets. For example if the supplier is able to complete the work at a lower cost than originally estimated, they could share the cost savings with the customer.
Cost plus percentage fee	A form of cost plus fee pricing where the supplier's costs are reimbursed and an agreed percentage of costs is paid as a fee for performing the work. This form of pricing carries the greatest cost risk for the customer as it provides no incentive for the supplier to control costs.
Cost tolerance	The variance in a budget that is allowed before an issue must be raised to the next level of management. See also: tolerance.
Cost variance (CV) More: – Encyclopaedia	An earned value management term that indicates how work is progressing in cost terms. It represents the value of the work done less the actual cost of the work done: CV = BCWP – ACWP (budget cost of work performed – actual cost of work performed) A negative result shows that more money is being spent than value being created, i.e. the project is overspending. A positive number indicates that less money is being spent than had been expected in order to create the corresponding value.
Cost/benefit analysis	The analysis of the potential costs and benefits of a project or programme to allow comparison of the returns from alternative forms of investment. Usually expressed as a simple ratio of the costs to the value of benefits. Sometimes referred to as benefit/cost analysis. The principle is exactly the same but the ratio is reversed.
Cost/Schedule Control Systems Criteria	In 1967 the US Department of Defence defined a standard for the reporting of progress on defence projects. The most common method that meets this standard is earned value management.

Crash cost	The cost of reducing an activity to its crash duration.
Crash duration	The reduced duration of an activity as a result of crashing.
Crashing	If there is an urgent need to shorten the critical path of a network, critical activities may be 'crashed'. This indicates drastic action to reduce the duration of an activity, probably by introducing additional resources at additional cost. Alternatives should be considered to calculate the maximum duration compression for the least cost and maintaining risk at acceptable levels.
Create the project plan	An activity from the PRINCE2 Initiating a Project (IP) process that creates the project plan. The equivalent in Praxis is the *plan delivery* activity in the definition process. The ISO21500 equivalent is it is also a combination of Develop schedule and Develop budget. In the PMBoK® guide it is a combination of Develop Schedule and Determine Budget.
Create WBS (5.4)	A PMBoK® guide process that takes the project scope statement and project scope management plan and creates a work breakdown structure. In Praxis this is part of the scope management procedure and is also very similar to the PRINCE2 product-based planning technique described in the plans theme. The ISO21500 equivalent is Create work breakdown structure.
Create work breakdown structure (4.3.12)	An ISO21500 process that takes the project scope statement and project scope management plan and creates a work breakdown structure and work breakdown structure dictionary. In Praxis this is part of the scope management procedure and is also very similar to the PRINCE2 product-based planning technique described in the plans theme. The PMBoK® guide equivalent is Create WBS.
Critical activity	An activity on the critical path.

Critical chain

More:

– Encyclopaedia

The critical chain technique was developed by Dr. Eliyahu Goldratt in his 1997 business novel, Critical Chain[7].

The method builds on the principles of critical path analysis and resource limited scheduling to identify chains of activities that are constrained by both dependencies and resource availability. Importantly, the technique then goes on to take aspects of human nature into account.

Critical path

The end result of critical path analysis is the identification of the longest sequence of activities in a network. This sequence will have the lowest float of any sequence of activities - usually, but not always, zero.

Critical path analysis

More:

– Encyclopaedia

Critical path analysis is a time scheduling technique for analysing a network diagram. It calculates dates when activities in the network should occur and identifies flexibility in the performance of some activities.

The two important limitations of critical path analysis are that:

- only one estimated duration is used for each activity;
- the technique makes no allowances for resource availability.

The calculation comprises three phases:

- forward pass;
- backward pass;
- float calculations.

Critical path method

See critical path analysis.

Critical sequence

Critical path analysis uses dependency links and durations to calculate an end date for a project; it does not take resource limits into account.

Most resource limited scheduling algorithms schedule activities according to resource availability but still quote float figures based on critical path analysis.

The sequence of activities that has no flexibility, either from the critical path calculation or because there is no flexibility in the resources they need, is called the critical sequence.

[7] Goldratt, E. M., (1997), Critical Chain, North River Press, Great Barrington, MA.

Critical success factors	The key environmental factors that are deemed critical to the success of a project, programme or portfolio. For instance: it may be deemed critical to the success of the project that regular meetings take place between the client and prime contractor. Should this regular communication not be part of the project environment, the project is not likely to succeed.
Criticality index	A Monte Carlo analysis will perform many critical path analysis calculations using randomly selected activity durations. This can result in identification of many different critical paths. The criticality index indicates the frequency with which an activity appears on the critical path, e.g. an activity with a criticality index of 0.75 appears on the critical path in 75% of the critical path analyses performed during the Monte Carlo simulation.
Cross-organizational programme	A term used by MSP to indicate a programme that needs commitment from multiple organisations to achieve the desired outcomes.
Current date	See progress date.
Current finish date	A term sometimes used to indicate the most recently calculated (and therefore current) estimate of the scheduled finish of an activity.
Current start date	A term sometimes used to indicate the most recently calculated (and therefore current) estimate of the scheduled start of an activity.
Customer	The individual, or group, who commission the project and will benefit from the final deliverables. In a contractual relationship, the customer will purchase goods and services from a supplier. In this context, the PMBoK® guide refers to the customer as the buyer.
Customer's quality expectations	A term used in PRINCE2 that refers to the quality expected from the project's output as described in the project product description.
Cybernetic control More: – Encyclopaedia	Cybernetic control is evident in all aspects of nature and technology. It occurs when a closed system regulates itself using a feedback loop. Examples range from a body cooling itself through perspiration to a safety valve on a steam engine. Many control processes used in P3 Management are examples of cybernetic control.

Cycle time	In agile the cycle time represents the time taken between taking an item from the backlog and delivering a product. In traditional planning terms this is not dissimilar to an activity duration but arises from the similarities between agile and a production environment. An alternative term is lead time.
Daily log More: – Description	A daily log is a personal document that records informal information that is not stored in any of the other defined documentation. It is primarily a diary of events that its owner can use as an aide memoire of conversations and decisions. This document is used in both Praxis and PRINCE2.
Daily stand-up	A short meeting to assess progress, typically occurring daily and limited to 15 minutes. The meeting discusses what has been done the previous day, will be done today and any problems being encountered. Usually associated with the scrum approach to product development.
Dangle	Most network diagrams are drawn with a single start activity and a single finish activity. If other activities have either no predecessors or no successors they are referred to as dangles.
Dangling logic	The GAO SAG term for a dangle.
Dashboard report	A concise report showing (usually in graphical form) the key performance indicators for a project, programme or portfolio.
Data date	The PMBoK® guide term for the progress date.
Date constraint	The GAO SAG term for imposed dates.
Decision networks	See probabilistic networks.
Decision trees More: – Encyclopaedia	A decision tree is a technique for identifying alternative courses of action and their implications (often in terms of cost). It shows decisions and consequences as lines between nodes. If the object is to quantify costs, the expected cost of decisions and their possible outcomes can be calculated for any node in the tree. The purpose is to calculate the full implications of a decision rather than just the initial cost.
Decomposition	The process of dividing elements of a breakdown structure into smaller components.

Define	The part of the portfolio life cycle where the projects, programmes and (if appropriate) change to business as usual are defined. In Praxis, this phase is managed as part of the portfolio management process.
Define activities (4.3.13)	The third process within ISO21500's scope subject group. It is a planning process that uses the work breakdown structure to identify the work needed to produce the project's products. The output is an activity list. In Praxis the equivalent is the *identify work* step in the schedule management function. The PRINCE2 equivalent is the first part of the *identifying activities and dependencies* step in the plans theme, which follows on from the development of a product flow diagram. The PMBoK® guide categorises this work as part of the project time management knowledge area using the Define Activities process.
Define Activities (6.2)	The second process within the PMBoK® guide's Project Time Management knowledge area. It is a planning process that uses the scope baseline to identify the work needed to produce the project's products. The outputs are an activity list, activity attributes and a milestone list. In Praxis the equivalent is the *identify work* step in the schedule management function. The PRINCE2 equivalent is the first part of the *identifying activities and dependencies* step in the plans theme, which follows on from the development of a product flow diagram. ISO21500 categorises this work as part of the scope subject group using the process Define activities

Define project organisation (4.3.17)	This ISO21500 process defines the full project organisation with roles and responsibilities. In the PMBoK® guide this is covered by Plan Human Resource Management. Praxis and PRINCE2 make the distinction between the management team and the delivery team. When describing organisational activities they both focus on the management team. In Praxis appointments are covered in *appoint identification team* in the identification process and *appoint definition team* in the definition process. Similarly, PRINCE2 has the organisation theme and the design and appoint the project management team activity in the Starting Up a Project (SU) process.
Define scope (4.3.11)	An ISO21500 process that develops a detailed description of the project and its products. The equivalent in the PMBoK® guide is Define Scope. The equivalent in Praxis is the *define scope* activity in the definition process. In PRINCE2 it is the create the project plan activity in the Initiating a Project (IP) process (which includes the preparation of all product descriptions).
Define Scope (5.3)	A PMBoK® guide process that develops a detailed description of the project and its products. The equivalent in ISO21500 is Define scope. The equivalent in Praxis is the *define scope* activity in the definition process. In PRINCE2 it is the create the project plan activity in the Initiating a Project (IP) process (which includes the preparation of all product descriptions).
Defining a Programme	This is the second process in the MSP transformational flow. Its objectives are to undertake detailed definition and planning so that a decision can be made whether or not to proceed with the programme. The process starts with the programme brief and key outputs include a detailed business case, programme structure and governance baselines. It is the programme equivalent of Initiating a Project in PRINCE2 and as these processes are so similar, Praxis brings them together into the single Definition process.

Definition	The second phase of a project or programme life cycle where requirements are refined, a preferred solution identified and plans prepared. In Praxis this phase is managed by the definition process, in PRINCE2 by the Initiating a Project (IP) process, in the PMBoK® guide by the Develop Project Management Plan process and in ISO21500 by the Develop project plans process.
Definition documentation	At the end of the Praxis definition process, a request for authorisation will be submitted to the project or programme sponsor. The decision whether or not to proceed to the delivery phase will be made after a review of the relevant definition documentation which typically includes: • Management plans. • Business case. • Delivery plans. This is broadly equivalent to the PRINCE2 project initiation documentation and the project management plan in the PMBoK® guide and ISO21500.
Definition of done	A term used in agile for acceptance criteria.
Definition of ready	An agile term for the criteria that must be in place for a piece of work (activity, work package, stage etc.) to be started. Similar to the planning term 'make ready needs'.
Definition plan	The definition plan is created in the identification process and, alongside the brief, is one of the documents submitted to the sponsor when seeking approval for the definition phase of the life cycle. This document is based on the general delivery plan format and adapted to suit the context of the work. Since this plan only exists in conjunction with a project or programme brief, its content can be simplified to avoid duplication.

Definition process

More:

- Process
- Competence
- Capability maturity
- Resources

This process manages the definition phase of the project or programme life cycle. Its goals are to:

- develop a detailed picture of the project or programme;
- determine whether the work is justified;
- describe governance policies that describe how the work will be managed;
- gain the sponsor's authorisation for the delivery phase.

An authorised brief and definition plan will trigger the process, which is fundamentally the same regardless of whether it has been decided to govern the work as a project or a programme. The output will be a set of documents that describe all aspects of the work, with their content and detail varying to suit the context.

This is equivalent to the Initiating a Project (IP) process in PRINCE2, the Develop project plans process in ISO21500 and the Develop Project Management Plan process in the PMBoK® guide.

Definition team

The team that manages the definition process in Praxis.

On smaller projects the same team will manage the work through its entire life cycle. On more complex projects and programmes the management team may change in its make up between the identification, definition and deliver phases of the life cycle.

See also: identification team.

Definitive estimate

An estimate resulting from bottom-up estimating. Sources vary, but a definitive estimate is normally considered to be within ± 5-10%.

Delegation

More:

- Knowledge
- Competence

Delegation is the practice of giving a person or group the authority and responsibility to perform specific activities on behalf of another. The act of delegation does not transfer accountability and the person who has delegated the work remains accountable for its results.

The goals of delegation are to:

- allocate work effectively to individuals teams and suppliers within the project, programme or portfolio;
- use delegation as a motivation and development tool.

The APMBoK also contains a delegation function.

While PRINCE2 doesn't describe the tools and techniques of delegation it does go into some detail about how delegation is applied in the organisation structure. This is included in the progress theme.

The PMBoK® guide and ISO21500 do not discuss delegation.

Deliberate decision event

An event in a probabilistic network where a decision is made based upon the outcome of the preceding activities or any other information that prevents the decision being made automatically. In other words, finalising the sequence of activities will need human intervention when the necessary information is available.

Deliver a Work Package

An activity from the PRINCE2 Managing Product Delivery (MP) process.

This is where the individual or team that has created a work package hands it over to the project manager. The activity includes quality checks and updates to relevant plans.

The equivalent in Praxis is the *deliver products* activity in the development process.

The PMBoK® guide does not formally define the project manager/product development team relationship but, in general, the delivery of products is covered by the Direct and Manage Project Work process.

ISO21500 does not have products or deliverables as a primary output of any of its processes. Instead it explains, in Direct project work, that "*deliverables are the result of the integrated processes performed as defined in the project plans*."

Deliverable

A product that is to be delivered to the user/customer.

Delivering the Capability

This is a process from the MSP transformational flow. It covers the coordination and management of project delivery according to the programme plan in order to achieve the blueprint.

This process must work closely with the Realizing the Benefits process to ensure that project outputs successfully create benefits.

Praxis combines the process models for projects and programmes and its equivalent is the delivery process.

Delivery

More:

- Knowledge
- Resources

This is an area in Praxis that is about the functions immediately concerned with the delivery of outputs, outcomes and benefits. Six of the sections deal with components that are fundamental to every project, programme and portfolio:

- Scope: what are the objectives and scope of the work?
- Schedule: how long will it take to achieve?
- Finance: how are necessary funds acquired and costs managed?
- Risk: what are threats and opportunities involved?
- Change: what areas of business-as-usual must be changed to realise benefits?
- Resource: how will the necessary resources be acquired, mobilised and managed?

Delivery documents

- Description

Praxis defined three categories of documentation. Delivery documents are the most dynamic of the three documentation groups and should be maintained in accordance with the principles of information management and configuration management.

They are at the heart of executing the work and are primarily used in the delivery, development and boundaries processes.

Delivery plan

Praxis uses the term delivery plan to distinguish a document from a management plan.

Delivery plans come in various shapes and sizes. The first delivery plan to be prepared will be the project or programme definition plan. Subsequently, delivery plans can be prepared to cover a part of the life cycle (e.g. a stage or tranche plan), a delivery component (e.g. a benefits review plan or communication plan) or a specialist plan (e.g. an exception plan or contingency plan).

It is useful for all types of delivery plan to follow a consistent format although this should be adapted as necessary and not followed slavishly.

Delivery process

More:

- Method
- Competence
- Maturity
- Resources

This Praxis process manages the delivery phase of the project or programme life cycle.

The delivery phase of a small project may comprise only one stage; the delivery phase of a programme may comprise only one tranche. Most projects and programmes will comprise multiple stages or tranches that are conducted in serial or parallel.

The goals of delivering a project or programme are then to:

- delegate responsibility for producing deliverables to the appropriate people;
- monitor the performance of the work and track against the delivery plans;
- take action where necessary to keep work in line with plans;
- escalate issues and replan if necessary;
- accept work as it is completed;
- maintain communications with all stakeholders.

This is equivalent to the Controlling a Stage (CS) process in PRINCE2.

In the PMBoK® guide there are three processes that together cover the same area:

- Direct and Manage Project Work.
- Monitor and Control Project Work.
- Perform Integrated Change Control.

Similarly, in ISO21500 this area is covered by:

- Direct project work.
- Control project work.
- Control changes.

Delivery team

Praxis makes a distinction between the management team and the delivery team. The delivery team includes all those who are responsible for performing the activities that deliver products. This may include internal resources and external resources (suppliers).

Delphi technique

More:

- Encyclopaedia

The Delphi technique is an iterative process for gaining consensus on an issue from a group of subject matter experts. It has been used very effectively by large organisations for strategic business planning.

Demobilisation

The controlled disposal of assets and dispersal of resources that are no longer needed by the project, programme or portfolio.

See also mobilisation.

Dependency

Often used as an abbreviation for a dependency link but PRINCE2 also uses this term to refer to relationships between products in a product flow diagram.

Dependencies may be internal (under the control of the project manager) or external (outside the control of the project manager).

Dependency link

In precedence diagrams, relationships between activities can be defined in four different ways. The simplest and most common dependency link is the finish to start link.

Others include:

- Start to start.
- Finish to finish.
- Start to finish.

In critical path analysis, dependency links may be given a time value that is included in the forward pass and backward pass calculations. These values are variously known as lead time or lag time. Some authorities maintain that lead time is a time value on a start to start link and lag time is the corresponding value on a finish to finish link. This differentiation is of use when applied to ladder networks.

In a probabilistic network, these dependencies can indicate alternative ways in which a sequence of activities may be done.

In activity on arrow networks, dependencies are defined by the way that activities and dummies interconnect with events.

Dependency network

A generic term for all forms of network that show the dependencies between the activities that have to be done to complete a project.

This encompasses deterministic networks such as activity on arrow and precedence as well as probabilistic networks.

Design and appoint the project management team	An activity from the PRINCE2 Starting Up a Project (SU) process that is concerned with designing the structure of the project management team and appointing suitable individuals. This is performed by the project manager with help from the executive, both of whom have been appointed earlier in the process. This approach broadly assumes that this team will take the project through its entire life cycle. Praxis allows for the identification team to be different from the definition team (particularly relevant for larger, more complex projects and programmes). Therefore the equivalents in Praxis are the *appoint identification team* and *appoint definition team* activities in the identification and definition processes respectively. The equivalents in ISO21500 are the Define project organization and Establish project team processes. The corresponding PMBoK® guide processes are Plan Human Resource Management and Acquire Project Team. In both ISO21500 and the PMBoK® guide these processes cover the delivery team as well as the management team.
Design and build	A project delivery approach where the design and construction are contracted to a single entity.
Design authority	Construction and engineering projects are populated with technical specialists such as structural engineers and mechanical engineers who ensure the overall consistency and coherence of a project or programme. Business change projects, and particularly programmes, do not have the same obvious roles to ensure that all aspects of a diverse set of deliverables are consistent and integrated. In some circumstances, the role of the design authority is created to fulfil this need. The term is most often used in environments that are more focused on business change than engineering.
Detail activity	Activities at the lowest level of the work breakdown structure that represent discrete pieces of work.
Detail schedule	The lowest level of schedule that shows the detail activities.

Determine Budget (7.3)	This PMBoK® guide process develops a detailed budget or the project using bottom-up estimating. The primary output is the cost baseline (budget) but this process is also used to determine funding requirements. In Praxis the equivalent for a non-complex project is the *estimate costs* step in the financial management procedure. For more complex projects the equivalent is the *refine base estimates* and *estimate reserves* step in the more detailed budgeting and cost control procedure. The corresponding process in ISO21500 is Develop budget, although this addresses costs only and not funding. PRINCE2 does not define specific cost related activities and this is covered as part of the *prepare estimates* step in the plans theme.
Deterministic critical path	The GAO SAG defines this as "The critical path as defined by the initial or current set of inputs in the schedule model." This is simply a definition of the critical path and does not seem to be an attempt to make a distinction between the critical path from a deterministic network and the critical path from a probabilistic network.
Deterministic network	Both the activity on arrow and precedence forms of network are said to be deterministic since they have no facilities to accommodate probabilistic dependencies. In simple terms this means that deterministic networks are not able to include relationships which represent alternative sequences of activities or probabilities of alternative sequences.
Develop budget (4.3.26)	This ISO21500 process develops a detailed budget for the project using bottom-up estimating. In Praxis the equivalent for a non-complex project is the *estimate costs* step in the financial management procedure. For more complex projects the equivalent is the *refine base estimates* step in the more detailed budgeting and cost control procedure. The corresponding process in the PMBoK® guide is Determine Budget, although this addresses funding as well as costs. PRINCE2 does not define specific cost related activities and this is covered as part of the prepare estimates step in the plans theme.

Develop Project Charter (4.1)	The first process in a PMBoK® guide project is to develop the project charter. The project charter is very similar in content to the project brief in both Praxis and PRINCE2 and therefore this process corresponds to the identification process in Praxis and the Starting Up a Project (SU) process in PRINCE2. However, the key difference is that documents such as a business case and a statement of work are inputs to the process whereas these are developed within the corresponding processes in Praxis and PRINCE2. In ISO21500 the equivalent is Develop project charter.
Develop project charter (4.3.2)	The first process in an ISO21500 project is to develop the project charter. The project charter is very similar in content to the project brief in both Praxis and PRINCE2 and therefore this process corresponds to the identification process in Praxis and the Starting Up a Project (SU) process in PRINCE2. However, the key difference is that documents such as a business case and a statement of work are inputs to the process whereas these are developed within the corresponding processes in Praxis and PRINCE2. In the PMBoK® guide, the equivalent is Develop Project Charter.
Develop Project Management Plan (4.2)	This PMBoK® guide process has one purpose – to develop the project management plan. The project management plan is primarily a set of management plans and other governance documents. The equivalent in Praxis is therefore the *prepare governance documents* activity in the definition process. PRINCE2 includes this set of documents in the project initiation documentation and brings it together in the Assemble the project initiation documentation activity of the Initiating a Project (IP) process. In ISO21500 the equivalent is Develop project plans.

Develop project plans (4.3.3)	This ISO21500 process produces two plans – the project plan (a delivery plan) and a set of management plans. These two documents are very similar in content to the definition documentation in Praxis. The equivalent in Praxis is the *consolidate definition documentation* activity in the definition process. PRINCE2 calls this set of documents the project initiation documentation and brings it together in the assemble the project initiation documentation activity of the Initiating a Project (IP) process. In the PMBoK® guide the corresponding process is Develop Project Management Plan, although this focuses on the management plans rather than the delivery plans.
Develop project team (4.3.18)	This ISO21500 process is concerned with getting the best out of the individuals in a project team. It spans many aspects of human resource management, many of which will be out of the span of control of the project manager on smaller projects. The larger the project the more relevant this process becomes. In Praxis these subjects are dealt with in knowledge functions rather than as specific project processes. The most relevant functions are teamwork and learning and development, although all the interpersonal skills are relevant. In the PMBoK® guide the equivalent process is Develop Project Team. PRINCE2 does not address human resource management in any detail.
Develop Project Team (9.3)	This PMBoK® guide process is concerned with getting the best out of the individuals in a project team. It spans many aspects of human resource management, many of which will be out of the span of control of the project manager on smaller projects. The larger the project the more relevant this process becomes. In Praxis these subjects are dealt with in knowledge functions rather than as specific project processes. The most relevant functions are teamwork and learning and development, although all the interpersonal skills are relevant. In ISO21500 the equivalent process is Develop project team. PRINCE2 does not address human resource management in any detail.

Develop schedule (4.3.23)

This ISO21500 process covers the development and analysis of network diagrams to produce activity schedules and resource requirement schedules.

Praxis covers these areas in schedule management and its component topics: time scheduling and resource scheduling.

PRINCE2 addresses these areas in the plans theme.

The equivalent process in the PMBoK® guide is Develop Schedule.

Develop Schedule (6.6)

This PMBoK® guide process covers the development and analysis of network diagrams to produce activity schedules and resource requirement schedules.

Praxis covers these areas in schedule management and its component topics: time scheduling and resource scheduling.

PRINCE2 addresses these areas in the plans theme.

The equivalent process in ISO21500 is Develop schedule.

Development life cycles

More:

- Encyclopaedia

The most common development life cycle is the 'waterfall'. This is generally regarded as being the 'traditional' development life cycle. Its name relates to the fact that it looks like a cascade where water falls from one level to the next.

Another way of representing this is to draw it in a 'V' shape. This highlights the top-down approach to defining requirements, the bottom-up approach to developing products and the verification and validation of what has been produced against what was required.

Development process

More:

- Process
- Competence
- Capability maturity
- Resources

This is the process where things actually get produced. It is very simple but very context sensitive. The principles of the development process can be applied to any scope of work and in essence it is simply a process for delegation from one level in the organisation structure to another.

In some contexts this may be replaced with a specialised approach, e.g. in agile projects, it may be replaced with a scrum development process.

The goals of the process are to:

- transfer responsibility for a package of work;
- execute the package of work;
- transfer ownership of the finished products.

The equivalent process in PRINCE2 is Managing Product Delivery (MP).

The PMBoK® guide and ISO21500 do not have separate processes for delegated work. Instead, they take the view that the processes they define can be applied at different levels, e.g. at project level and at work package level. It is up to the project manager to decide how the application of the same processes at different levels should interface.

Direct and Manage Project Work (4.3)

This is the top level PMBoK® guide process that co-ordinates more detailed execution processes. It is the process of leading and performing the work defined in the project management plan.

The equivalent in ISO21500 is Direct project work. In Praxis it is the delivery process and in PRINCE2 Controlling a Stage (CS).

Direct costs

Costs that are directly attributable to an activity e.g. the effort, material or equipment costs, as opposed to indirect costs.

Direct project work (4.3.4)

This is the top level ISO21500 process that co-ordinates more detailed implementing processes. It is the process managing the performance of the work defined in the project plans.

The equivalent the PMBoK® guide is Direct and Manage Project Work. In Praxis it is the delivery process and in PRINCE2 Controlling a Stage (CS).

Directing a Project (DP)	The PRINCE2 process that describes the involvement and responsibilities of the project board. It comprises five sub-processes covering authorisation of project stages and guidance as required on a management by exception basis. The equivalent in Praxis is the sponsorship process. Neither the PMBoK® guide nor ISO21500 have processes dedicated to the sponsorship of a project.
Dis-benefit	A term used to describe an unfavourable outcome of a project or programme. This does not necessarily mean that something has gone wrong. It may be that in transforming an organisation there are some expected dis-benefits. The work is still worthwhile because these dis-benefits are outweighed by the benefits. Dis-benefits should be documented and quantified in the same way as benefits.
Discount factor	See discount rate.
Discount rate	Discount factors indicate how much money reduces in value due to inflation. They are used in discounted cash flow calculations to compare cash flows over a period of years taking inflation into account.
Discounted cash flow More: – Encyclopaedia	Discounted cash flow (DCF) is an investment appraisal technique that, unlike payback or accounting rate of return, takes the value of money over time into account. The basic principle is that £1,000 today doesn't have the same value (in terms of what it can buy) as it does next year. This is important to projects and programmes because they spend cash and create benefits that have a cash value, but over a period of time.
Discovery phase	See sprint zero.
Discrete distribution	A distribution used in Monte Carlo analysis to indicate that only specific durations between the optimistic and pessimistic estimates can occur.
Discrete effort	An activity that can be measured as part of earned value management and produces a specific output or product.

Discretionary dependencies

More:

- Encyclopaedia

Dependency links that are not an absolute requirement of the work being done. They indicate a chosen sequence of work as distinct from the constraints indicated by mandatory dependencies.

Distribute information (4.3.39)

An ISO21500 implementing process concerned with keeping stakeholders informed throughout the project.

In Praxis this area is covered by the information management and stakeholder management procedures.

There is not a single equivalent in PMBoK® guide. It would be more accurate to say that the Manage Communications and Control Communications processes collectively cover the same ground as the ISO21500 Distribute information and Manage communications processes. (Note: when drawing comparisons it is somewhat confusing that Manage Communications is an executing process in the PMBoK® guide and the process of the same name in ISO21500 is a controlling process).

PRINCE2 doesn't have a specific theme for communication and addresses this area primarily through the description of stakeholder engagement in the organisation theme.

Distributions

More:

- Encyclopaedia

Techniques such as programme evaluation and review technique (PERT) and Monte Carlo analysis, use statistical estimates for the duration or cost of an activity.

In both cases a distribution must be specified. With PERT this is normally a beta distribution from which a mean duration or mean cost is calculated.

In Monte Carlo, random durations are generated between the upper and lower estimates. These are calculated according to the distribution specified. Typical distributions used are beta, uniform, triangular or discrete distributions.

Do nothing option

The consequence or result of not performing a project or programme. A business case should outline this as part of an investment appraisal.

Drawdown

The movement of funds from the funding body to the project, programme or portfolio. Normally done in accordance to the funding profile.

Drop line method

A way of illustrating progress on a Gantt Chart. A vertical line is drawn at the progress date. The line is stepped to the left or right to cross activities and indicate the percentage complete of the activities.

This clearly illustrates where activities are ahead or behind schedule.

Dummy	An arrow in an activity on arrow network that represents a link between two events but which is not an activity. Its purpose is purely to show logical connections between events and is normally drawn as a dotted line to distinguish it from activities. The APM PSMC also refers to dummy activities in the context of precedence networks. These are used instead of leads and lags so that they are visible on a computer generated Gantt chart. It alternatively refers to these as schedule visibility tasks.
Duration	The time an activity is estimated to take. Usually measured as working time but sometimes estimated in elapsed time.
Dynamic systems development method (DSDM)	An agile project delivery framework developed and owned by the DSDM consortium.
Earliest finish	The earliest time an activity can finish. Calculated during the forward pass of critical path analysis.
Earliest start	The earliest time an activity can start. Calculated during the forward pass of critical path analysis.
Early adopter	Customers who buy or adopt the first version of a product. Early adopters typically like innovative products and provide early feedback on product quality.
Early event time	The earliest time an event can occur. Calculated during the forward pass of critical path analysis.
Earned hours	The earned value of work done expressed in effort hours instead of money.
Earned value More: – Encyclopaedia	The value of the work done according to the baseline cost, i.e. if all the work done so far had been completed at the original rates and costs, this is the amount it would have cost. Also referred to as budget cost of work performed (BCWP).
Earned value analysis	The calculations performed as part of earned value management.

Earned value management

More:

- Encyclopaedia

Assessing the progress of activities through 'time spent so far' or 'money spent so far' is usually misleading. Earned value calculations assess the value of work that has been done at a particular point and express that in proportion to the value of what should have been done by that point.

The key advantages of earned value management are that it gives an accurate view of how work is progressing and enables this to be used in estimates of the eventual cost and duration of the project.

Earned value techniques

A collective term used by the APM PSMC for various techniques used to measure the progress of an activity, e.g. level of effort, earning rules and apportioned effort.

Earning rules

Earning rules relate to the way progress is credited to an activity in earned value management. The three most common rules are:

- 0/100: no value is credited to the activity until it is complete.
- 50/50: 50% of the value is credited when the work is started and 50% when it is completed.
- Percent complete: value is credited in proportion to progress on the activity.

Other rules can be applied such as 20/80. The advantage of this is that some value is credited at the start to register that an activity is in progress but the achievement of full value is weighted towards completion.

Effort

The resource time needed to complete an activity.

Effort driven activity

An activity whose duration can be varied according to the resources available to do it. For example if an effort driven activity was defined as needing 12 effort days it would be scheduled for a 6 day duration if two resources were available and 4 days if three resources were available.

Effort remaining

An estimate of the remaining effort required to complete an activity as estimated at the progress date.

Elapsed time

The calendar time between two points as distinct from the working time. In a normal five day working week there are seven elapsed days.

Elemental trend analysis

An alternative name for line of balance.

Emergent design

A phrase originally coined in the context of education but consistent with the agile approach to projects where individual functionality is developed first and the overall architecture emerges as the product develops.

Emergent programme	A term used in MSP to describe a programme that absorbs one or more existing projects into a programme.
End goal	The MSP term for the ultimate objectives of a programme. Also referred to as the to-be state.
End project report	A PRINCE2 report prepared by the project manager and submitted to the project board. It confirms the handover of all project deliverables. The report should also include an updated business case and an assessment of the project's performance against the original project initiation documentation.
End stage assessment	In PRINCE2, the project manager and project board will review the end stage report in order to decide whether or not to proceed with the next stage.
End stage report	A PRINCE2 report prepared by the project manager at the end of each project stage. The report is submitted to the project board and contains an assessment of the project's performance during the stage and the project's status on completion of the stage.
Enhance	One of the four possible opportunity responses.
Enterprise environmental factors	A term used in the PMBoK® guide used for factors that are not under the control of the management team but may influence or constrain the management of a project, programme or portfolio.
Enterprise project management office	A PMO that explicitly covers all projects, programmes and portfolios within an enterprise.
Environment More: – Knowledge	The way a project, programme or portfolio is governed and managed will depend upon many different external factors referred to in Praxis as the environment. These must be understood by the P3 sponsor and manager at the outset so that the work is managed in an appropriate manner.
Epic	A large user story that will be broken down into several more specific user stories when possible. PRINCE2 Agile defines an epic as a high-level definition of a requirement that has not been sufficiently refined or understood yet.

Escalate issues and risks

An activity from the PRINCE2 Controlling a Stage (CS) process that is invoked if the stage (or project) is forecast to exceed the delivery tolerances set by the project board. In this case the project manager issues an exception report for the project board to consider.

In Praxis this eventuality is encompassed within the *corrective action* activity in the delivery process.

Neither the PMBoK® guide nor ISO21500 have an equivalent exception process. This type of escalation is implicit within the many references to change requests that are submitted to the Perform Integrated Change Control process.

Escalation

The exercise of raising an issue with a higher level of management.

Establish project team (4.3.15)

This ISO21500 process is concerned with acquiring the human resources needed to complete project activities. It includes the ultimate release of resources when no longer required.

The equivalent in Praxis is the mobilisation function and the *mobilise* and *demobilise* activities in the definition, boundaries and closure processes.

The equivalent in the PMBoK® guide is Acquire Project Team.

There is no obvious equivalent in PRINCE2 but it could be argued that mobilisation is implicit in the plan the next stage activity in the Managing a Stage Boundary (SB) process.

Estimate

An assessment of a quantity. In project terms estimates are usually of time and cost for an element of a project. Estimates should be qualified to indicate the likely degree of accuracy e.g. by appending a spread such as ±15%.

Alternatively, categories of estimate can be defined such as preliminary estimate or definitive estimate. These terms usually imply a certain degree of accuracy.

See also estimating techniques.

Estimate activity durations (4.3.22)

This ISO21500 process takes the output of the Estimate resources process and estimates the time that those resources will take to complete the activity.

The equivalent in the PMBoK® guide is Estimate Activity Durations.

In Praxis this is covered by the planning function and in PRINCE2 by the procedure in the plans theme.

Estimate Activity Durations (6.5)

This PMBoK® guide process takes the output of the Estimate Activity Resources process and estimates the time that those resources will take to complete the activity.

The equivalent in ISO21500 is Estimate activity durations.

In Praxis this is covered by the planning function and in PRINCE2 by the procedure in the plans theme.

Estimate Activity Resources (6.4)

This PMBoK® guide process identifies the resources needed to complete an activity, including people, materials and equipment.

The equivalent in ISO21500 is Estimate resources.

In Praxis this is covered by the planning function and in PRINCE2 by the procedure in the plans theme.

Estimate at completion (EAC)

More:

- Encyclopaedia

The current projected total cost of the project derived from earned value management data. The actual cost so far of the project is added to the estimate to completion.

Estimate costs (4.3.25)

An ISO21500 process concerned with estimating the cost of completing an activity.

Praxis covers estimating generically in the planning function and makes reference to specific estimates in budgeting and cost control and schedule management.

PRINCE2 combines cost and time estimating in the *prepare estimates* step of the procedure in the plans theme.

Estimate Costs (7.2)

A PMBoK® guide process concerned with estimating the cost of performing an activity.

Praxis covers estimating generically in the planning function and makes reference to specific estimates in budgeting and cost control and schedule management.

PRINCE2 combines cost and time estimating in the *prepare estimates* step of the procedure in the plans theme.

Estimate resources (4.3.16)

This ISO21500 process identifies the resources needed to perform an activity, including people, materials and equipment.

The equivalent in the PMBoK® guide is Estimate Activity Resources.

In Praxis this is covered by the planning function and in PRINCE2 by the procedure in the plans theme.

Estimate to complete

An estimate of the effort and cost required to complete an activity, work package or project.

Estimate to completion (ETC)

More:

- Encyclopaedia

The earned value management term for a forecast of how much is left to spend in order to complete the project. It is calculated by taking the value of work done so far (budgeted cost of work performed) from the original budget (budget at completion) and dividing by the cost performance index. This assumes that the rate of progress on the remainder of the project will be the same as for the completed part of the project.

Estimated time at completion (ETAC)

More:

- Encyclopaedia

The estimated completion date of the project according to earned value management. This is calculated by adding the time taken so far to an estimate of remaining duration that uses the schedule performance index as a guide to future performance.

Estimating funnel

A representation of how estimating accuracy increases through successive phases and stages in the life cycle.

Estimating techniques

More:

- Encyclopaedia

Estimating is the activity of predicting what a piece of work will require in terms of time, resource and cost. This can range from a high level estimate of a project in a programme to detailed estimating of individual activities in a work package. There are four fundamental approaches to estimating:

- Parametric.
- Comparative (also known as analogous).
- Analytical (also known as bottom-up estimating).
- Subjective.

These terms are not mutually exclusive. For instance, a particular method may combine parametric and subjective approaches; another may be a combination of comparative and analytical. Estimating methods are as diverse as the range of organisations who undertake projects and programmes.

Ethics

More:

- Knowledge
- Resources

Ethics are the moral principles that govern someone's behaviour or the way they perform an activity. Ethical behaviour could be said to be the cornerstone of competence in a professional environment. For that reason, most professional bodies have a code of conduct and all members must commit to adhere to it.

In the context of Praxis, the goals of ethics are to:

- encourage ethical behaviour in the practitioners of the P3M discipline;
- raise the standards of professionalism by which P3 managers are judged and thereby raise the status of the profession.

The equivalent function in the APM BoK is ethics frameworks. The subject is not addressed in the PMBoK® guide, ISO21500 or PRINCE2.

Ethics frameworks

The APM BoK function dealing with ethics.

Evaluate the project

An activity from the PRINCE2 Closing a Project (CP) process that reviews all aspects of the project including changes to the original plan, team performance and an assessment of expected benefits. The outputs are an end project report and a lessons report.

The equivalent in Praxis is the *review* activity in the closure process.

The PMBoK® guide covers this review as part of Close Project or Phase. ISO21500 doesn't make any specific reference to a review at the end of the project but does have a specific process for Collecting lessons learned.

Event

A point that represents the start or finish of an activity in an activity on arrow network. The event is usually represented by a circle divided into three or four sections.

Event report

In addition to time-driven progress reports, progress may be reported at a particular event. This may be more applicable to certain stakeholders and will also be an input to the go/no go decision process at the end of a defined segment of work e.g. the end of a stage within a project; the end of a contractor's work package; the end of a tranche within a programme or the end of a project within a portfolio.

Event-driven control

Controls, in the form of progress meetings, reports and reviews, can be event-driven or time-driven. An event-driven control is triggered by an event such as the end of a stage or achievement of a milestone.

Exception	An actual or forecast deviation from the baseline that is outside the tolerance levels agreed between the levels of management within the project.
Exception assessment	A review in PRINCE2 where the project board will decide whether or not to approve an exception plan.
Exception plan	A plan produced in situations where costs or timescales have already been exceeded or are anticipated to exceed the agreed tolerances. The exception plan should demonstrate the remedial action recommended for project, sub-project, work package or stage that has exceeded its tolerances.
Exception report	A report that describes an exception, provides an analysis of the exception, gives options for the way forward and identifies a recommended option. An exception typically occurs when an aspect (e.g. scope or time) or a part of project (e.g. work package or stage) exceeds the agreed tolerances.
Exclusive OR dependency	This type of probabilistic dependency indicates that only one of the predecessors can be undertaken. Whichever one is chosen excludes all others. If probabilities are used, they must add up to 1. The same type of rules can apply to outgoing activities as well as incoming activities.
Execute a work package	The activity in PRINCE2 where work gets done and products are produced. This activity is managed by the individual or team to whom the work has been delegated. The work must be managed within the agreed tolerances. If these tolerances are exceeded or forecast to be exceeded the team manager must raise an issue with the project manager. The equivalent in Praxis is the *perform work* activity in the development process. Neither the PMBoK® guide nor ISO21500 have a defined relationship between a project manager and team manager. This could be regarded as implicit within the application of Direct and Manage Project Work (PMBoK® guide) and Direct project work (ISO21500) when these processes are applied at project and work package level.

Executing process group (PMBoK® guide)

A PMBoK® guide process group that includes the processes involved in producing the project's deliverables. These processes can be applied at different levels with the project, i.e. for the project as a whole or for a stage or sub-project.

When viewed from the perspective of the project life cycle, these processes are covered in Praxis by activities in the delivery process, development process and elements of individual procedures such as procurement and stakeholder management.

In PRINCE2 the corresponding elements at the project life cycle level are activities within the Controlling a Stage (CS) and Managing Product Delivery (MP) processes.

ISO21500 equivalent process group is called simply – implementing.

Executive

A PRINCE2 term for the person who chairs the project board (the body that provides sponsorship in a PRINCE2 project). The executive 'owns' the business case and is ultimately responsible for making sure that the project meets the business' objectives.

Expectancy theory

Expectancy theory was an approach to motivation developed in the 1950's. In simple terms it relates the effort an individual will put into their work to their expectation of rewards. The outcomes of doing a job are classed as intrinsic and extrinsic.

Examples of intrinsic outcomes are a sense of achievement or a feeling of having learnt something. Intrinsic outcomes come from the performance of the activity itself and are not given by someone else.

The degree to which intrinsic or extrinsic factors will motivate an individual is inherent within models such as Maslow's hierarchy of needs.

Expected monetary value

Expected monetary value is a way of quantifying the value of uncertain events or a sequence of uncertain events.

In its simplest form the risk events in the risk register can be valued in terms of their monetary impact on the objectives, their impact on the budget or the cost of their mitigation.

More sophisticated techniques include decision trees.

Expert judgement

This may seem like a general term but in the PMBoK® guide it is a frequently referenced specific technique. It is defined as judgement based on expertise in an application area, knowledge area, discipline, industry, etc.

Exploit	One of the four possible opportunity responses.
Extended life cycle	A life cycle that includes the achievement of outcomes and realisation of benefits up to the point when the business case has been achieved.
External constraint	Constraints that act upon a project, programme or portfolio from outside the scope of the work.
External dependency	A dependency between a project activity and an activity external to the project.
Fallback plan	An alternative name for a contingency plan.
Fast tracking More: – Encyclopaedia	If a project's overall duration needs to be shortened, one course of action is to overlap activities or groups of activities that were previously planned as sequential. This may result in increased resource requirements, costs and almost certainly increased risk. Compressing a project schedule in this way is known as fast tracking.
Feasibility study	A study to assess whether a particular approach to a project or programme is possible and practical within the terms of the business case.
Feedback log	A log that records and tracks feedback from all stakeholders and ensures that all feedback is dealt with.
Feeder buffer More: – Encyclopaedia	A reserve of time applied to a non-critical chain in the critical chain technique.
Finance management plan More: – Description – Templates	Not all aspects of this plan will be relevant in some contexts. In other contexts it may be necessary to expand this into multiple management plans. For example, projects that are part of a programme may not need to perform investment appraisal or establish funding. Major infrastructure programmes may need to develop a management plan for funding that is separate to the management plan for financial control.

Financial management

More:

- Knowledge
- Competence
- Capability maturity
- Resources

Financial management covers all aspects of obtaining, deploying and controlling financial resources. The goals of financial management are to:

- estimate the cost of achieving the objectives;
- assess the viability of achieving the objectives;
- secure funds and manage their release throughout the life cycle;
- set up and run financial systems;
- monitor and control expenditure.

This Praxis summary function has three component functions for use in more complex contexts:

- Investment appraisal.
- Funding.
- Budgeting and cost control.

In the PMBoK® guide these aspects are covered by the project cost management knowledge area and in ISO21500 by the cost subject group.

PRINCE2 does not have a theme dedicated to financial matters but these are mentioned in the plans theme and progress theme.

Finish activity

An activity in a precedence diagram which deliberately has no succeeding activities, i.e. it represents a finish point in the network. Networks can have multiple finish activities.

Finish event

The event at the end of an activity in an activity on arrow diagram. Also known as a j-node.

Finish float

Float normally indicates that the start and finish of an activity can be delayed without affecting the critical path. In certain circumstances the start of an activity may be on the critical path but its finish is not. The activity is then said specifically to have finish float. This situation arises from the use of finish to finish links in precedence networks and dummies linking the finishes of activities in an activity on arrow network.

Finish no earlier than (FNET)

A type of imposed date specifying that an activity cannot finish earlier than the specified date.

If all previous activities can be completed with time to spare this could lead to a critical path that has float.

Finish no later than (FNLT)	A type of imposed date specifying that an activity cannot finish later than the specified date. If all previous activities cannot be completed in time this would lead to a path with negative float.
Finish to finish link	A type of dependency link in a precedence diagram which indicates that the successor may not finish until the predecessor has finished. Also known as an FF link.
Finish to start link	A type of dependency link in a precedence diagram which indicates that the successor may not start until the predecessor has finished. Also known as an FS link.
Firm fixed price contract	See firm price contract.
Firm price contract More: – Encyclopaedia	A payment method where a fixed price is agreed for a fixed specification. The difference between a firm price and a fixed price is that a firm price contract does not permit changes to the agreed specification.
Fishbone diagram	See Ishikawa diagram.
Fixed duration	Some scheduling software allows activity durations to fluctuate for different scheduling purposes. For example, some resource limited scheduling algorithms will adjust resource usage profiles within an activity in order to match supply with demand. This results in changes to the activity duration. A fixed duration activity is defined to prevent the duration being changed to anything other than the period specified.
Fixed finish	See imposed finish.
Fixed formula method	A method in earned value management for allocating a proportion of the budget value of an activity or work package to the start of the work and the remaining value to the end of the work. See also earning rules.
Fixed price contract More: – Encyclopaedia	A payment method where a fixed price is agreed for a fixed specification. Any changes to the agreed specification are often paid on a time and materials basis.

Fixed price incentive fee contract More: – Encyclopaedia	A payment method where the customer pays the supplier a fixed price but the supplier can earn additional fees if defined performance criteria are met.
Fixed price with economic price adjustment contract	See variation of price contract.
Fixed start	See imposed start.
Float	A measure of the time flexibility available in the performance of an activity. Three degrees of flexibility are known as total float, free float and independent float. Total float and free float are useful in performing resource limited scheduling. Independent float is rarely calculated, either manually or electronically. The term total float is often reduced to simply 'float'. In precedence networks that use start to start or finish to finish links the float at the beginning of an activity (start float) may be different to that at the end of the activity (finish float).
Flow-based	An agile approach where backlog items are pulled from the backlog as resources become available without breaking the work into timeboxes.
Follow-on actions	A project or component of a project (stage, work package, sub-project) may be closed despite there being some outstanding activities to perform or issues to resolve. These are collectively known as follow-on actions and must be documented in a follow-on actions report for handover to another team or plan.
Follow-on actions recommendations	The PRINCE2 term for follow-on actions that are included in an end stage report or end project report.
Follow-on actions report	The nature of a follow-on actions report will vary considerably according to its context. In simple terms it must list the actions that remain outstanding when the project or programme team is demobilised. Such actions could relate to unfinished deliverables, corrective action on existing deliverables or tidying up managerial loose ends such as final payments.

Forecast expenditure	The future, estimated costs for a project, programme or portfolio.
Forecast final cost	See estimated cost at completion.
Forensic schedule analysis	The study of how actual events caused delay in a schedule. Typically used to build, justify or counter a contractual claim for additional payments.
Forming	The first stage of team building in the Tuckman model.
Forward pass	The first phase of critical path analysis. It calculates the earliest starts and earliest finishes of activities. The calculation starts by assuming that the earliest start of the first activity is 0. Durations are then added to the earliest starts to calculate the earliest finishes. The earliest start for an activity with more than one predecessor is equal to the latest of the earliest starts of the predecessor activities. The principle is exactly the same for both precedence and activity on arrow networks.
Fragnet	Template sections of a network diagram or schedule that represent repetitive sections of a schedule, e.g. the floors of a multi storey building. This term was initially coined by the Primavera scheduling application to describe a feature unique to that product. Since used by guides such as the APM PSMC to refer generally to sections of a schedule that can be cut and pasted.
Free float	The amount of time an activity may be delayed without causing any knock on delay to successor activities. The formula for calculating the free float of an activity 'A' is: Free float$_A$= Earliest latest start of all successor activities - earliest start$_A$ - duration$_A$

Function

Both the APM BoK and the knowledge section of Praxis are based on a functional analysis of project, programme and portfolio management. Individual components in both guides (such as risk management or stakeholder management) are therefore known as functions.

Much of the information covered in APM BoK and Praxis functions is included in the PMBoK® guide as the tools and techniques of the various processes.

ISO21500 processes do not contain tools and techniques and therefore it omits most of this information.

In PRINCE2 the themes are effectively the same as functions but are not as extensive.

Function point

More:

- Encyclopaedia

A characteristic of a software programme that can be used to perform parametric estimating in function point analysis. The function points fall into one of five categories. For each function point, a score is given depending upon its degree of complexity. This results in a table where the number of function points in each degree of complexity is shown.

Function point analysis

More:

- Encyclopaedia

A parametric estimating technique for software development that was developed by A.J. Albrecht while working for IBM in the early 1980s.

The principle of this approach is that software is made up of a number of function points that fit into one of five types. For each function point a score (the multiplier) is given depending upon its degree of complexity.

Function point count

The number of function points in a software program weighted to account for their differing degrees of complexity. Part of the parametric estimating technique function point analysis.

Functional manager

A manager who is responsible for a specialised technical department in an organisation, e.g. Marketing, Accounting, Engineering etc. When combined with cross functional projects these managers form one side of a matrix organisation.

Functional organisation

An organisation that has clear boundaries between the different hierarchical groupings in the company e.g. Finance, Marketing, Engineering etc. In the context of a matrix organisation the term is used to represent a traditional organisation that has little or no cross functional co-ordination of projects.

Functional specification

A specification of requirements for a product, based on the functions that the product is intended to perform. A lower level of specification detail than a performance specification.

A user story is a form of functional specification.

Funding

More:

- Knowledge
- Competence
- Capability maturity
- Resources

Funding is the means by which the finance required to undertake a project, programme or portfolio is secured and made available to perform the work. Its goals are to:

- determine the best way to fund the work;
- secure commitment from the fund holders;
- manage the release of funds throughout the life cycle.

Funding is also a function in the APM BoK but the different types of funding and their acquisition is not covered in PRINCE2, ISO21500 or the PMBoK® guide.

Funding profile

An estimate of a project's funding requirements against time.

Furlong

More:

- Encyclopaedia

Gary Furlong provides a comprehensive model for conflict resolution in his book 'The Conflict Resolution Toolbox'[8] at the heart of which is the circle of conflict.

The circle has six elements, which Furlong identifies as the main drivers for conflict.

Gamma distribution

A statistical distribution which some practitioners maintain is more accurate than the beta distribution when used in PERT analysis.

Gantt chart

More:

- Encyclopaedia

Henry Gantt was an American engineer working at the Frankford Arsenal in the early part of the 20th century. In 1917 he developed the Gantt Chart which still bears his name today.

Also known as a bar chart, the Gantt Chart simply shows bars on a horizontal time scale. The basic format is applicable at all levels in the P3 environment. At the project level, the bars represent activities; at programme level they primarily represent projects and at a portfolio level they primarily represent projects and programmes.

On the simplest of projects it may be sufficient to schedule activity simply by drawing a Gantt Chart but on most projects the chart would be showing the results of critical path analysis, including highlighting critical activities and float.

[8] Furlong, G., (2005), The Conflict Resolution Toolbox, Wiley and Sons, Ontario.

GAO Schedule Assessment Guide	The U.S. Government Accountability Office (GAO) first published its Schedule Assessment Guide in December 2015. It is subtitled 'Best Practices for Project Schedules'.
Gate	It is common for the points between phases or stages in a life cycle to be used to review the status of the project or programme and make a go/no go decision on whether or not it should continue. These decision points are usually known as gates.
Gate review	A review of the business case performed at the end of a phase, stage or other key decision point. This review will confirm that the business case is still valid or, if it is not, reshape or cancel the project or programme.
Gated review	The MSP term for a gate review.
Generalised activity network	A form of probabilistic network.
Give ad hoc direction	This activity from the PRINCE2 Directing a Project (DP) process is concerned with the help and assistance that the project board give to the project manager as and when required. Hence the term 'ad-hoc direction'. In Praxis this is covered by the *provide management support* activity in the sponsorship process.
Giver/Receiver	A GAO term that refers to dependencies between different schedules, e.g. where a product is completed in a sub-contractor's schedule and is handed over to then appear in the main contractor's schedule.
Go/ no go	The form of control used at a decision point where a choice is made whether to continue a course of action or stop. In projects and programmes, the points in where a go/no go decision is made are usually known as gates. These occur at the end of each phase and stage or tranche and the decision is based on whether or not the business case remains viable.

Goals

Every function and process in the Praxis Framework have a set of goals. These explain the purpose of the function or process but are also important aspects of capability maturity. The Praxis capability maturity model is based on the CMMI® approach in which the achievement of goals is an indicator of level 1 capability and maturity.

The goals are also restated in each competency, providing a baseline across the four areas of knowledge, process, competence and capability maturity.

Governance

More:

- Knowledge
- Resources

The word 'governance' clearly derives from the practice of governing a political state by its government. In recent years the concept of corporate governance has taken the term and applied it to the commercial world. There are many different definitions of governance but they all include certain key elements, all of which can be adapted and applied to the governance of projects, programmes and portfolios. The goals of P3 governance are therefore to:

- provide a system of good practice by which projects, programmes and portfolios will be managed;
- balance the differing needs of all stakeholders;
- monitor the actions of management to mitigate the risk of inappropriate actions;
- clearly define roles and responsibilities and ensure they are performed by competent people;
- ensure ethical behaviour and promote transparency.

Governance process

More:

- Method
- Competence
- Maturity

In Praxis, this portfolio management process brings together all the governance and professionalism functions and applies them across the portfolio. Its goals are to:

- provide sponsorship of the objectives of the portfolio;
- oversee assurance of the portfolio;
- promote the discipline and profession of P3 management.

Graphical Evaluation and Review Technique

A more complex form of PERT where probability distributions are used to represent the current state and 'transitions' (rates of progress) of activities. This form of network diagram also allows probabilistic dependencies.

Group resource

See skill group.

Hammock

More:

- Encyclopaedia

An activity that spans between two points in a network diagram. It has no duration of its own but derives one from the time difference between the two points to which it is connected.

Hand over

The formal transfer of ownership of a deliverable from the project to the customer. This should include confirmation that all the acceptance criteria have been met.

In the case of the handover of a programme or project's final output it should also include agreement on a list of outstanding items to be completed even though the project or programme has been formally closed.

Hand over products

The activity in the PRINCE2 Closing a Project (CP) process which is the main focus for the handover of the project's final output. Although this appears in the closing a project process, PRINCE2 recognises that handover may be staged.

The equivalent activity in Praxis is the *hand over* activity in the closure process.

Instead of hand over, the PMBoK® guide refers to the 'transition of the final product' that is an output of the process Close a Project or Phase.

ISO21500 makes no specific reference to the transfer of ownership of the project's products but this should be seen as implicit in Close project phase or project.

Hersey and Blanchard

More:

- Encyclopaedia

Paul Hersey and Ken Blanchard first developed their 'Life cycle theory of leadership' in 1969[9]. They subsequently renamed the theory 'situational leadership' and continued to develop it both together and individually.

The theory describes four different leadership styles and four levels of individual or team maturity or readiness. It then combines these to suggest which style of leadership best suits which level of maturity.

[9] Hersey, P. and Blanchard, K.H., Life cycle theory of leadership, Training and Development Journal, 23 (5), (1969).

Hertzberg

More:

- Encyclopaedia

Frederick Hertzberg first described his two-factor theory in his book 'The Motivation to Work'[10]. In it, he identified the principle that the factors that create dissatisfaction at work are not the same as, and not opposite to, those that create satisfaction.

Herzberg classified the things that mainly affect dissatisfaction as hygiene factors. The name reflects the medical analogy that good hygiene can prevent illness but doesn't necessarily improve health. The factors that produce satisfaction are known as motivators.

If hygiene factors are poorly addressed on the project, they can make the team member dissatisfied. However, if they are well addressed they do not necessarily motivate. Conversely, if motivational factors are well addressed they motivate but their absence does not necessarily produce dissatisfaction.

Hierarchy of networks

Networks, whether they are precedence or activity on arrow, can become very large. One way to manage this is to develop a hierarchy of networks, which ideally will reflect the work breakdown structure.

At the highest level, boxes in the network represent major sections of work. Each of these is broken down into a sub-network where the boxes represent smaller sections of work, which are in turn broken down. At the lowest level the boxes represent activities.

In a critical path analysis the duration of a higher level box (and hence its early dates and late dates) will be calculated from the dates at the beginning and end of its sub-network.

Highlight Report

A PRINCE2 report prepared by the project manager at intervals determined by the project board. It reviews progress to date and highlights any actual or potential problems which have been identified during the period it covers.

Praxis and ISO21500 both refer to progress reports.

Histogram

See resource histogram.

Holiday

All scheduling software packages provide calendars for activities and/or resources. These usually allow the definition of a standard working week, e.g. Monday to Friday. A holiday is then any non-working day which is normally part of the working week, e.g. national holidays.

[10] Hertzberg, Frederick (1959) The Motivation to Work, Wiley, New York.

Horizontal integration	A term used by the APM PSMC to refer to one aspect of the assurance of a project schedule. This form of schedule assurance follows the paths through the network diagram to ensure, for example, that there are no missing dependency links, the schedule covers the full scope of the project and all necessary interfaces are included. Referred to as horizontal traceability in the GAO SAG See also vertical integration.
Horizontal traceability	The GAO SAG term for horizontal integration.
Host organisation	The majority of projects fall into one of two environments. Some projects are performed by one company (the contractor) on behalf of another (the client). Most projects are performed by an organisation for itself using mainly internal resources. This is the host organisation.
Human resource management plan	A PMBoK® guide document that sets out the policies and procedures to be used in the project human resource management knowledge area. It is a section within the project management plan.
Hygiene factors	See Hertzberg.
Hygiene theory	See Hertzberg.
Hypercritical	See supercritical.
i/ j numbers	In activity on arrow networks it is necessary to number the events (or nodes) so that logical relationships can be defined. Each activity can then be described in terms of the event where it starts and the event where it finishes. The start event contains the 'i' number and the finish event the 'j' number. These are sometimes referred to as the i-node and the j-node, giving rise to the term i/ j network as an alternative to activity on arrow.

Identification process

More:

- Method
- Competence
- Maturity
- Resources

This Praxis process manages the first phase of the project or programme life cycle. Its goals are to:

- develop an outline of the project or programme and assess whether is it likely to be justifiable;
- determine what effort and investment is needed to define the work in detail;
- gain the sponsor's authorisation for the definition phase.

Some initial idea or need for a project or programme will generate a mandate. This can take many forms ranging from a client's invitation to tender to a strategic objective in a corporate plan or simply a verbal instruction. The term mandate is applied to whatever information is used to trigger a project or programme.

The equivalent process in PRINCE2 is Starting Up a Project (SU). Develop Project Charter is the equivalent in both the PMBoK® guide and ISO21500.

Identification team

The team that manages the identification process in Praxis.

On smaller projects the same team will manage the work through its entire life cycle. On more complex projects and programmes the management team may change in its make up between the identification, definition and deliver phases of the life cycle.

See also: definition team.

Identify Risks (11.2)

The PMBoK® guide process that identifies risk events, both threats and opportunities. Its output is the risk register.

The equivalent in both Praxis and PRINCE2 is the *identify* step in the respective risk management procedures.

In ISO21500 the equivalent process is Identify risks.

Identify risks (4.3.28)

The ISO21500 process that identifies risk events, both threats and opportunities. Its output is the risk register.

The equivalent in both Praxis and PRINCE2 is the identify step in the respective risk management procedures.

In the PMBoK® guide the equivalent process is Identify Risks.

Identify Stakeholders (13.1)

This PMBoK® guide process deals with the identification of stakeholders and recording information about them in the stakeholder register.

The equivalent in Praxis are the *identify and assess* steps in the stakeholder management procedure.

PRINCE2 covers all aspects of stakeholder management as part of the organisation theme.

The equivalent process in ISO21500 is Identify stakeholders.

Identify stakeholders (4.3.9)

This ISO21500 process deals with the identification of stakeholders and recording information about them in the stakeholder register.

The equivalent in Praxis are the *identify and assess* steps in the stakeholder management procedure.

PRINCE2 covers all aspects of stakeholder management as part of the organisation theme.

The equivalent process in the PMBoK® guide is Identify Stakeholders.

Identifying a Programme

This is the first process in the MSP transformational flow. Its objectives are to undertake outline definition and planning so that a decision can be made whether or not to proceed to the next process – Defining a Programme.

The process starts with the programme mandate and key outputs include an approved programme brief, a functional programme board and a plan for completing the definition process.

It is the programme equivalent of Starting Up a Project in PRINCE2 and as these processes are so similar, Praxis brings them together into the single Identification process.

Impact

Used in qualitative risk analysis as one part of the assessment of a risk event (the other being probability). Impact is an assessment of the effect the risk event would have on objectives should it occur.

The detail with which impact is expressed could be as simple as a subjective 'high/medium/low' rating or as a numeric scale with detailed explanations of time and cost consequences.

Impact analysis

A collective term for techniques to assess the impact on the project or programme's objectives of a risk event, a change request or an issue.

Implementing (ISO21500)	An ISO21500 process group that includes the processes involved in performing the work of the project. These processes can be applied at different levels with the project, i.e. for the project as a whole or for a stage or sub-project. When viewed from the perspective of the project life cycle, these processes are covered in Praxis by the delivery process, development process and elements of procedures in various functions. In PRINCE2 the corresponding elements at the project life cycle level are activities within the Controlling a Stage (CS) and Managing Product Delivery (MP) processes. The equivalent in the PMBoK® guide is the executing process group.
Imposed dates	Start and finish dates for activities in a network diagram are normally calculated from the forward pass and backward pass of critical path analysis. Sometimes it is necessary to take external influences into account. These could include material delivery dates, approval meeting dates, contractual delivery dates and so on.
Imposed finish	An imposed date on the finish of an activity.
Imposed start	An imposed date on the start of an activity.
Inclusive OR dependency	This type of probabilistic dependency indicates that if any one of an activity's predecessors is completed then the activity can start. Probabilities can be attached to each of the emerging activities to indicate their chance of occurring. Unlike the exclusive OR dependency, the probabilities do not have to add up to 1.
Independent estimate	An estimate that is externally sourced to check internal estimates produced by the project or programme team.
Independent float	The degree of flexibility which an activity has which does not affect the float available to any predecessor or successor.
Indirect costs	Overhead costs associated with a project which cannot be directly attributed to any activity or discrete group of activities, e.g. the cost of a project support office.

Influence diagrams

More:

- Encyclopaedia

A decision support tool comprising a series of linked nodes. There are various conventions around the shape and colour of the nodes but a basic influence diagram comprises arrows and three shapes.

Rectangles indicate decisions or things that are controllable. Ovals represent uncertainties and diamonds represent values or the required outputs of the system being modelled. Arrows show the way these nodes influence each other.

Influencing

More:

- Knowledge
- Competence
- Resources

P3 managers will often be in a position where the exercise of direct authority is either inappropriate or impossible. In these situations the manager must seek to affect the behaviours and actions of others through influence rather than authority. The goals of influencing are to:

- develop and maintain a high performing team;
- persuade stakeholders to support the objectives;
- persuade stakeholders to support the achievement of the objectives.

The APM BoK also contains influencing as a function. The PMBoK® guide mentions it as a technique in Manage Project Team.

Inform

One of the four types of involvement (RACI) in a responsibility assignment matrix.

An 'I' is inserted into the table to indicate those who should be advised of a decision or change, typically in the context of activities or documents.

Information management

More:

- Knowledge
- Competence
- Capability maturity
- Resources

Information management is the collection, storage, dissemination, archiving and eventual destruction of information. Its goals are to:

- capture data accurately and consistently;
- develop usable information from raw data;
- maintain information securely and accessibly during its useful life;
- support effective decision making and communication.

The APM BoK also contains information management as a function. The PMBoK® guide has a section on project information (3.8) although this is more about specific information flows than a general discussion of information management.

Similarly, PRINCE2 contains many references to the handling of specific project documentation but does not have a general explanation of information management.

Information management plan

More:

- Description
- Templates

There is an information management element to all other management plans that deals with the format and distribution of specific documentation.

This management plan should not duplicate those policies. Rather, it is about general approaches to the creation, storage and dissemination of information.

Information required register

A schedule detailing the baseline, forecast and actual dates for the provision of information on a project.

This is principally applicable where a client, or their agents, are responsible to providing information to a contractor.

Infrastructure

A function in the APM BoK that deals with the overall infrastructure that supports the management of projects, programmes and portfolios. This encompasses concepts such as PMOs, communities of practice, centres of excellence, planning departments etc.

Inherent risk

A term used in PRINCE2 for the exposure arising from identified risk event before any risk response action has been taken.

Initiating (ISO21500)

An ISO21500 process group that includes the processes involved in getting the project underway. These processes can be applied at different levels with the project, i.e. for the project as a whole or for a stage or sub-project.

When viewed from the perspective of the project life cycle, these processes are covered in Praxis by the identification process and elements of individual functional procedures.

In PRINCE2 the equivalent process at the project life cycle level is Starting Up a Project (SU).

The equivalent in the PMBoK® guide is the initiating process group.

Initiating a Project (IP)

This is the second process in the PRINCE2 method. Its main output is the project initiation documentation. This is initially used by the project board to assess whether approval should be given for the first delivery stage of the project and subsequently as a baseline for managing the project.

The equivalent in Praxis is the definition process.

Although the approach in the PMBoK® guide and IS21500 is different, they both contain an integration process that is very similar in scope to Initiating a Project. In the PMBoK® guide this is Develop Project Management Plan and in ISO21500 it is Develop project plans.

Initiating process group (PMBoK® guide)

A PMBoK® guide process group that includes the processes involved in getting the project underway. These processes can be applied at different levels with the project, i.e. for the project as a whole or for a stage or sub-project.

When viewed from the perspective of the project life cycle, these processes are covered in Praxis by the identification process and elements of individual functional procedures.

In PRINCE2 the equivalent process at the project life cycle level is Starting Up a Project (SU).

The equivalent ISO21500 process group is called simply – initiating.

Initiation process

More:

- Method
- Competence

This is usually a one-off process in Praxis that manages the set-up of a portfolio.

It represents the point at which the host organisation makes the decision to manage its projects and programmes as a portfolio.

The goals of the process are to:

- decide what type of portfolio is required;
- design the portfolio infrastructure;
- obtain senior level approval and commitment;
- implement the portfolio.

Initiation stage

In PRINCE2 this is defined as the period between the authorisation of initiation by the project board and when they subsequently authorise or cancel the project. This stage is managed by the Initiating a Project (IP) process. The reason PRINCE2 includes this definition is so that initiation is seen as a management stage and therefore invokes associated documentation such as a stage plan.

i-node

The node at the start of an activity in an activity on arrow network. Also known as a start event.

See also i/ j numbers.

Integrated assurance

The coordination of assurance activities that are provided by a range of internal, external and specialist assurance bodies.

Integrated cost/ schedule reporting

See earned value management.

Integrated master schedule (IMS)

A schedule defined in the GAO Schedule Assessment Guide as "a program schedule that includes the entire required scope of effort". (N.B. the use of the term 'program' in this guide is not consistent with most other national and international guides and standards)

This schedule combines scheduling information from all participants in the project, including client, main contractor and sub-contractors at summary, intermediate and detailed level.

Integration (ISO21500 subject group)

An ISO 21500 subject group that provides a set of high level processes that co-ordinate the processes of individual subject groups. At the project level these processes align closely with the project life cycle. The processes comprise:

- Develop project charter.
- Develop project plans.
- Direct project work.
- Control project work.
- Control changes.
- Close project phase or project.
- Collect lessons learned.

The Praxis processes serve an equivalent purpose when applied to the project life cycle. The same is true of the PRINCE2 processes.

The PMBoK® guide and ISO21500 share a very similar structure and the equivalent knowledge area in the PMBoK® guide is project integration management.

Integrative management

More:

- Knowledge

The topics in this Praxis function do not directly address the fundamental components of delivery, i.e. scope, schedule, cost, risk, change and resource. They are integrative functions that act across those components.

The overall goals of the integrative management functions are to:

- plan all aspects of the work;
- develop and maintain the justification for the work;
- monitor and control performance;
- ensure information is accurate, current and accessible;
- establish and maintain a management team;
- identify and communicate with people affected by the work;
- ensure that the management of the work is relevant and effective.

The integrative functions are:

- Organisation management.
- Stakeholder management.
- Business case management.
- Planning.
- Control.
- Information management.
- Assurance.

The APM BoK has a similar group of integrative functions.

Interface	The APM BoK contains a section called interfaces. This describes general management functions that are not part of the field of P3 Management but have to interface with it. These interface functions are: Accounting, Health and safety; Human resource management; Law; Security and Sustainability. These are considered to be out of scope by the other guides. It is worth noting that the scope of the APM BoK function on human resource management is organisational - as opposed to the PMBoK® guide knowledge area of the same name which only deals with the management of human resources within the project team. In the APM PSMC the term is used to indicate a point of contact between two or more parties working on a project, e.g. between client and contractor, prime contractor and sub-contractor or management team and design team. In effect, managing these is an aspect of stakeholder management. The PSMC specifically addresses interfaces from the planning point of view and their effect on schedules in particular.
Interface activity	An activity that indicates a logical connection to another network diagram or page. When networks become large they may stretch across multiple sheets of paper. Interfaces are used to indicate the links between sheets. In a complex network, interfaces may also be used to indicate links between activities on a different part of the sheet where a link drawn normally would cross too many other lines. Interfaces are normally indicated by being drawn with a double line.
Interfering float	See Independent float.
Intermediate schedule	A type of schedule specified in the GAO SAG. It includes all information from the summary schedule together with key activities and milestones and that lead up to achieving the high-level milestones.

Internal rate of return

More:

- Encyclopaedia

When using discounted cash flows, the internal rate of return (IRR) is the discount rate that gives a net present value of zero.

Broadly speaking the IRR is the rate of growth delivered by a project or programme. The higher the IRR the more attractive the business case. In pure financial investment terms, if the IRR for a project or programme is not greater than the return that could be achieved by investing the equivalent sum of cash in the financial markets, it isn't worth undertaking the work.

Interpersonal skills

More:

- Knowledge

When the complexities of human behaviour are sub-divided into distinct functions it can inevitably become somewhat artificial and theoretical. But P3 sponsors, managers and team members need to understand the mechanisms by which people relate to, and interact with, other people.

Simple models such as the ones referenced in this Praxis function are a useful starting point for each individual as they build their own interpersonal skill-set. The component functions are:

- Communication.
- Conflict management.
- Delegation.
- Influencing.
- Leadership.
- Negotiation.
- Teamwork.

Investment appraisal

More:

- Knowledge
- Competence
- Capability maturity
- Resources

Investment appraisal is a collection of techniques used to identify the attractiveness of an investment. Its goals are:

- assess the viability of achieving the objectives;
- support the production of a business case.

Investment appraisal is very focused on the early phases of a project or programme and is performed in parallel with the early work on management plans and delivery plans.

The APM BoK also contains an investment appraisal function.

PRINCE2 mentions various related techniques in the business case theme.

The PMBoK® guide mentions investment appraisal techniques in the Plan Cost Management process and while ISO21500 refers to investment appraisal it does not mention specific techniques.

Invitation to bid

See Invitation to tender.

Invitation to tender	A document distributed to prospective suppliers inviting them to provide bids for a package of work. Usually synonymous with the terms request for quotation and request for proposal.
Ishikawa diagram	Also known as a fishbone diagram or a cause and effect diagram, these diagrams are used to relate many causes to one effect. Causes are grouped under headings on the left side of the diagram with the ultimate effect on the right. Commonly used as a tool for risk identification to identify sources of risk or in quality management to identify causes of product failure.
Island of stability	If a programme is implementing multiple changes in one business area, the programme team should consider planning the schedule so that there are periods of consolidation after major change. The programme should do this by rotating its focus from one area to another and not implementing all the changes to a particular business area at once.
ISO21500	ISO21500 is the guidance on project management published by the International Standards Organisation. The version referred to in this glossary is the first edition as implemented by the British Standards Institute in 2012. The ISO Guidance is very similar in appearance to the PMBoK® guide published by the Project Management Institute. It provides a set of processes that are arranged in a matrix to show how they relate to the knowledge and method elements of the P3 management framework. The key difference between ISO21500 and the PMBoK® guide is that ISO21500 processes do not contain tools and techniques. The standard does therefore not explain what the PMBoK® guide calls tools and techniques, PRINCE2 calls themes and Praxis and the APM BoK call functions.

Issue

An issue is something that has occurred and needs to be addressed (as opposed to a risk, which is something that could potentially occur).

Issues are recorded in an issue register and assessed to determine how they should be dealt with.

Different sources define issues in different ways. Praxis and the APMBoK define an issue as a problem that needs to be escalated to the sponsor, e.g. when progress is outside of approved tolerances.

PRINCE2 has a very broad definition of issues where anything from a major quality failure, through to a routine change request to a stakeholder enquiry, are all classed as issues.

The PMBoK® guide regards an issue as a point of dispute or matter that is under discussion.

ISO21500 has an issues log and often mentions issues without being specific about what constitutes an issue.

Issue log

The PMBoK® guide and ISO21500 term for an issue register.

Issue owner

The person who is responsible for ensuring that an issue is resolved.

Issue register

More:

- Description

The issue register records issues and contains detailed information about the nature, ownership and resolution of issues. In the various guides the exact content of the register will depend upon the particular definition of what constitutes an issue.

Issue report

In PRINCE2, the issue report contains a bit more information about specific issues than is contained in the issue register.

Iterative life cycle

A project life cycle where the overall scope is defined early on but the detail is developed iteratively and incrementally throughout the life cycle.

An iterative life cycle must be supported by correspondingly iterative development methods such as scrum for IT development.

j-node

The node at the end of an activity in an activity on arrow network. Also known as a finish event.

See also i/ j numbers.

Kanban board More: – Encyclopaedia	Kanban is a Japanese word that can be literally translated as signboard or billboard. In the 1950s Taiichi Ohno at Toyota developed a production control system using cards that provide a visual signal to trigger an action. Originally this was used to maintain high levels of efficiency in production lines and for the implementation of 'Just in time' (JIT) production.
Katzenbach and Smith More: – Encyclopaedia	Jon Katzenbach and Douglas Smith[11] define a team as: "a small group of people with complementary skills who are committed to a common purpose, performance goals and approach for which they are mutually accountable". This simple definition brings together team role models such as Belbin and Margerison-McCann (complementary skills) with P3 management (common purpose and performance goals) and models of leadership such as Hersey and Blanchard and McGregor (mutually accountable).
Key event schedule	See milestone plan.
Key performance indicators (KPIs)	Measurable indicators, chosen to reflect performance in working towards the main objectives of the project or programme, which will be used to report on progress. Any indicator can be chosen provided it is a key factor in the performance of the project. For example, performance indices based upon time and cost performance are a function of earned value management.
Kick-off	An event where those participating in a piece of work (e.g. project, stage, work package etc.) assemble for the first time.
Knowledge area (PMBoK® guide)	See project management knowledge area.

[11] Katzenbach, J. R. and Smith, D.K., (1993), The Wisdom of Teams: Creating the High-performance Organisation, Harvard Business School, Boston.

Knowledge management

More:

- Knowledge
- Resources

Knowledge management involves the systematic identification, recording, and distribution of insights and experiences that enables their adoption in new situations.

The goals of knowledge management are to:

- capture useful knowledge from the management of projects, programmes and portfolios;
- make tacit knowledge from experienced practitioners available to all;
- support capability maturity management and continuous improvement in P3 management.

Knowledge management is also a topic in the APM Body of Knowledge but is not covered in the PMBoK® guide, ISO21500 or PRINCE2 other than indirectly through references to the capture of lessons learned.

Kotter

More:

- Encyclopaedia

In 'Leading Change', John Kotter[12] introduced his "eight steps to transforming your organisation".

The eight steps can be placed in three categories: plan, deliver and embed. These correlate to the phases and processes of the project/programme life cycle. The planning steps align with the identification process and the definition process, the deliver steps are synonymous with the delivery process and embed is a key element of the benefits realisation process.

Ladder

More:

- Encyclopaedia

When drawing a network diagram it is common to come across a situation where activities are performed in parallel. For example if a new cable were being laid in a trench, the three activities: Dig Trench, Lay Cable, Backfill, may not run sequentially. This is called a ladder.

Lag time

Dependency links in a precedence diagram can have time allocated to them in order to indicate a waiting period between the points connected by the link. This time is referred to as a lag. Some sources use the term to apply specifically to the time allocated to finish to start or finish to finish links, preferring the term lead for time allocated to a start to start link.

Dummies in an activity on arrow network can similarly have time allocated and these are generally referred to as lags.

Late event time

The latest time an event could occur. Calculated during the backward pass of critical path analysis.

[12] Kotter, J. P., (1995), Leading Change, Harvard Business School Press, Boston MA.

Latest finish

The latest time an activity can finish. Calculated during the backward pass of critical path analysis.

Latest start

The latest time an activity can start. Calculated during the backward pass of critical path analysis.

Lead contractor

See prime contractor.

Lead time

Commonly used to represent the waiting time between order and delivery of materials.

Also used to refer to time allocated to a start to start link in a precedence diagram. See also lag time and ladders.

The APM PSMC glossary states that a lead is "A negative lag. By definition an illogical condition". However, the text of the guide additionally uses the term in its more conventional meaning described above.

In agile the lead time may represent the time taken between taking an item from the backlog and delivering a product. In traditional planning terms this is not dissimilar to an activity duration but arises from the similarities between agile and a production environment. An alternative term is cycle time.

Leadership

More:

- Knowledge
- Competence
- Resources

The verb *to lead* is derived from the word *laed*, a term common to ancient Northern European languages. It means a path, road, journey or course of a ship at sea. By implication a leader is one who guides those travelling the path.

Leadership has many definitions because it is exercised in so many different contexts. In simple terms in the context of P3 management, leadership is best defined by its goals, which are to:

- provide focus and promote commitment to objectives;
- inspire team members to successfully achieve the objectives.

The APM BoK also contains a function on leadership. The PMBoK® guide has a brief section on leadership in the tools and techniques section of the Manage Project Team process.

Neither PRINCE2 nor ISO21500 address the principles of leadership.

Leadership and stakeholder engagement (MSP theme)

MSP combines leadership and stakeholder management into this single theme.

The theme is primarily about stakeholder management and MSP uses the term 'engagement' to refer to the entire stakeholder management procedure.

The leadership aspects of the theme are concerned with the leadership of the stakeholder community rather than of the delivery team.

Learning and development

More:

- Knowledge
- Resources

Learning and development encompasses the continual improvement of competence at all levels of an organisation. The goals of learning and development in an organisation are to:

- develop competent individuals;
- encourage an environment of continual professional development;
- promote the contribution of learning and development to the capability maturity of the organisation.

The APM BoK also has a function for learning and development but it is not covered by PRINCE2, ISO21500 or the PMBoK® guide.

Lessons learned

Knowledge gained in the course of performing work that can be recorded and disseminated to improve the management of projects, programmes and portfolios in the future.

Lessons learnt

See lessons learned.

Lessons log

More:

- Description

A lessons log for a particular project or programme will have two distinct sections. The first is created in the *review previous lessons* activity during the identification process where lessons learned from previous work that are applicable to the current work are logged. The second section records lessons that have arisen in the conduct of the current work and may be applicable in the future.

Lessons report

In Praxis, a lessons report is a section of a progress report or event report. It is a review of what went well, what went badly and suggestions for lessons to be included in the lessons log.

In PRINCE2 the lessons report is derived from the end project report that is produced by the evaluate the project activity of the Closing a Project (CP) process.

The PMBoK® guide does not specify a similar document but makes general references to lessons learned documentation.

ISO21500 defines the lessons learned document as an output of the Collect lessons learned process.

Level of effort

A type of activity in earned value management that represents an activity that does not produce a specific end product and is measured by the passage of time.

Level of quality

An agile term relating to the overall quality level of a project's outputs. For example, in PRINCE2 Agile this is defined by the customer's quality expectations and acceptance criteria in the project product description.

Lewin

More:

- Encyclopaedia

Lewin's[13] model for the management of change is one of the simplest, comprising three steps: unfreeze, change and refreeze. These align closely with the 'prepare, implement and sustain' steps in the Praxis change management procedure.

[13] Lewin, K., (1951), Field Theory in Social Science, Harper and Row, New York.

Life Cycle

More:

- Knowledge
- Resources

A P3 life cycle illustrates the distinct phases that take an initial idea, capture stakeholder requirements, develop a set of objectives and then deliver those objectives.

The goals of life cycle management are to:

- identify the phases of a life cycle that match the context of the work;
- structure governance activities in accordance with the life cycle phases.

The APM BoK also has a function for the life cycle. PRINCE2 doesn't explicitly describe a life cycle but the process model implicitly supports the typical life cycle by having a process for each phase.

Similarly, in the PMBoK® guide the processes in the project integration management knowledge area support the typical life cycle. The same is true of the processes in the integration subject group of ISO21500.

Life cycle cost

The cost of a project over the whole of its life cycle.

Life cycle costing

When considering alternative projects, life cycle costing considers all the associated costs of the whole product life cycle, including acquisitions, operation and termination (or de-commissioning). When considering costs over a long period of time, the cost of money must be taken into account for valid comparisons of cost and revenue.

Likelihood

Used in qualitative risk analysis as an alternative term to probability.

Likely cost

The middle of the three cost estimates used in PERT/ Cost. In the view of the estimator this is the most likely cost of the activity.

Likely duration

The middle of the three duration estimates used in PERT. In the view of the estimator this is the most likely cost of the activity.

Line of balance

More:

- Encyclopaedia

A time scheduling technique that is typically used in situations where skilled resources are performing the same activity on multiple products within a project.

Line of balance charts are sometimes combined with physical layouts of the work on the vertical axis, and may be referred to as a time chainage chart.

Linear sequential model

See waterfall.

Linked bar chart	A Gantt chart that shows the dependency links between activities. On all but the simplest bar charts this format becomes very confusing. Unfortunately many scheduling software packages do not offer network diagrams and the linked bar chart is the only way of viewing dependencies.
Links	See dependency links.
Logic density	The average number of dependency links per activity in a network diagram.
Logic diagram	An alternative name for a network diagram.
Logic link	See dependency links.
Logical relationship	See dependency links.
Logistics planning	The planning of movement of physical resources such as materials, plant and equipment.
Longest path	The GAO SAG identifies the potential difference between the longest path in a network diagram and the critical path. Although these are usually the same, it is possible that the use of imposed dates could mean that the critical path is not the same as the longest path through a network. The longest path does not take account of imposed dates and may not be the path that determines the final completion date.
Loop	A circular sequence of activities which cannot be resolved as part of a critical path analysis. Some forms of network diagram (e.g. GERT) allow loops in order to model repeated sequences of activities. These must allow the number of repetitions to be defined or a condition that allows for exit of the loop.
Maccoby and Scudder More: – Encyclopaedia	In their book 'Leading in the heart of conflict'[14], Michael Maccoby and Tim Scudder identify a five step process for conflict management. Its component activities have many parallels in P3 management.

[14] Maccoby, M. & Scudder, T., (2011), Leading in the heat of conflict.

Make or buy More: – Encyclopaedia	At one level, as the name suggests, this is a simple decision about whether to make something in-house or buy it from an external supplier. It also suggests that it only relates to physical products but the principles are equally applicable to services, i.e., should they be provided by in-house resources or external contractors.
Make ready needs	Things, other than dependency links, that must be in place for an activity to start, e.g. specifications, approvals, materials etc. This is similar to the term definition of ready used in agile.
Manage Communications (10.2)	A PMBoK® guide executing process concerned with creating, collecting, distributing, storing, retrieving and archiving of communications throughout the project organisation. In Praxis this area is covered by the information management and stakeholder management procedures. There is not a single equivalent in ISO21500. It would be more accurate to say that the Distribute information and Manage communications collectively cover the same ground as the PMBoK® guide processes Manage Communications and Control Communications. (Note: when drawing comparisons it is somewhat confusing that Manage Communications is an Executing process in the PMBoK® guide and the process of the same name in ISO21500 is a controlling process) PRINCE2 doesn't have a specific theme for communication and addresses this area primarily through the description of stakeholder engagement in the organization theme.
Manage communications (4.3.40)	An ISO21500 controlling process concerned with managing communications throughout the project organisation. In Praxis this area is covered by the information management and stakeholder management procedures. There is not a single equivalent in PMBoK® guide. It would be more accurate to say that the Manage Communications and Control Communications processes collectively cover the same ground as the ISO21500 Distribute information and Manage communications processes. (Note: when drawing comparisons it is somewhat confusing that Manage Communications is an executing process in the PMBoK® guide and the process of the same name in ISO21500 is a controlling process). PRINCE2 doesn't have a specific theme for communication and addresses this area primarily through the description of stakeholder engagement in the organisation theme.

Manage project team (4.3.20)	This ISO21500 process is concerned with managing individual members of the project team through a variety of interpersonal skills. The equivalent in the PMBoK® guide is Manage Project Team. In Praxis, this area is covered by the interpersonal skills such as influencing and conflict management. PRINCE2 does not go into any detail about the management of individuals.
Manage Project Team (9.4)	This PMBoK® guide process is concerned with managing individual members of the project team through a variety of interpersonal skills. The equivalent in ISO21500 is Manage project team. In Praxis, this area is covered by the interpersonal skills such as influencing and conflict management. PRINCE2 does not go into any detail about the management of individuals.
Manage Stakeholder Engagement (13.3)	This PMBoK® guide process deals with communication and working with stakeholders. Its aim is to keep stakeholders engaged and resolve any issues that arise. The equivalent in Praxis is the *engage* step in the stakeholder management procedure. In ISO 21500 the equivalent is Manage stakeholders. In PRINCE2 this area is covered by the stakeholder section of the organization theme.
Manage stakeholders (4.3.10)	This ISO 21500 process deals with communication and working with stakeholders. Its aim is to keep stakeholders engaged and resolve any issues that arise. The equivalent in Praxis is the *engage* step in the stakeholder management procedure. In the PMBoK® guide the equivalent is Manage Stakeholder Engagement. In PRINCE2 this area is covered by the stakeholder section of the organization theme.

Management plans

In Praxis these documents set out the way a function will be managed.

The two main sections cover the policy and procedure of the function with the detail being adapted to the context of the work. This is distinct from a delivery plan, which explains the detail of how a specific piece of work will be delivered.

Policy includes sections on roles and responsibilities, information management, assurance, budget and interfaces to other functions. Procedure begins with defining the steps to be used in performing the function, followed by detailed recommendations on the tools and techniques to be used in each step.

Both the PMBoK® guide and ISO21500 also refer to management plans while PRINCE2 uses the term management strategy.

Management process

More:

- Method
- Competence
- Maturity
- Resources

This Praxis process deals with the high level management of a portfolio. The activities will be applied according to the type of portfolio and its context. Its goals are to:

- assess the suitability of projects and programmes for inclusion in the portfolio;
- maintain a beneficial and manageable mix of projects and programmes.

Although primarily a portfolio management process, the activities described here are also relevant to the application of the delivery process for large, complex programmes.

Management products

In PRINCE2 the documents used to manage the project are known as management products as opposed to the products that make up the project's end result, which are known as specialist products.

Management reserve

A reserve of time or cost that is provided to accommodate cost increases or risk events that were not foreseen.

Management stage

PRINCE2 and Praxis both break the delivery phase of the project life cycle into stages. In PRINCE2 these are further described as management stages to emphasise that they are created to facilitate the management of delivery and are not necessarily discrete technical stages.

Management team

Praxis makes a distinction between the management team and the delivery team. The management team includes all those who are responsible for managing the project or programme rather than performing the activities that deliver products.

Managing a Stage Boundary (SB)

Management of the boundaries between stages is PRINCE2's primary form of go/no go control. This process covers the work that is done as one stage comes to an end and the next is being planned.

The equivalent in Praxis is the boundaries process.

The PMBoK® guide and ISO21500 take a different approach to component phases or stages of a project. Rather than use specific processes for these components of a project, they simply apply the main process model in a scaled down form, i.e. integration processes that closely align to a project life cycle can be applied to an individual phase or stage.

Managing Product Delivery (MP)

The PRINCE2 process that covers the work of the person responsible for a work package, often referred to as a team manager. It includes the receipt of requirements from the project manager, the execution of the work and the handover of the completed products.

The equivalent in Praxis is the development process.

The PMBoK® guide and ISO21500 do not have separate processes for delegated work. Instead, they take the view that the processes they define can be applied at different levels, e.g. at project level and at work package level. It is up to the project manager to decide how the application of the same processes at different levels should interface.

Managing Successful Programmes (MSP)

The guidance for the management of programmes published by Axelos Ltd. a joint venture company between the UK Government's Cabinet Office and Capita plc.

MSP is not designed to cover the detailed tools and techniques used in managing programmes. What it is designed to do is provide a consistent and well-structured methodology based on the programme life cycle.

Managing the Tranches

A process from the MSP transformational flow that is concerned with governing the programme and ensuring it remains aligned with corporate strategy.

It also manages the launch, co-ordination and closure of programme tranches with an emphasis on co-ordinating the release of new capabilities into the business (covered by the Delivering the Capability process) and the management of change that will realise benefits from the new capabilities (covered by the Realizing the Benefits process).

Mandate

The term mandate applies to whatever information is used to trigger the initiating process or a project or a programme. It could be a minute in a management meeting, the award of a contract to supply or simply an email from a senior manager.

In PRINCE2 the project mandate triggers the Starting up a Project (SU) process.

There is no obvious equivalent point of conception of the idea that leads to a project in the PMBoK® guide or ISO21500.

Mandatory dependencies

Dependency links that are an inherent part of the work being done. For example, an activity to put a roof on a house must follow the construction of the walls. This is a mandatory dependency.

Deciding to paint the doors before the windows would be a discretionary dependency.

Margerison-McCann

More:

- Encyclopaedia

Charles Margerison and Dick McCann developed their team development profile and team wheel based on the personality theories of Jung. Its advocates cite its basis on psychometric testing as its main advantage over other team profiles such as Belbin.

Margin

MSP describes this as the flexibility that a programme has for achieving its blueprint, benefits and business case.

It seems reasonable to assume that MSP is referring to the degree to which some benefits could be unrealised with the programme still considered a success.

Maslow

More:

- Encyclopaedia

Abraham Maslow proposed his hierarchy of needs in 1943[15]. The theory has been widely accepted and quoted even though Maslow never did any empirical research to support it.

The hierarchy shows a progression of motivational factors. It starts at basic human survival and progress to higher intellectual needs. The hierarchy starts with basic physiological needs such as food, water, oxygen, exercise. It then progresses through another four levels culminating with self-actualisation which is about satisfying yourself that you have fulfilled your potential. As each of these needs is satisfied it ceases to become a motivator.

Master network

The top level network in a hierarchy of networks.

[15] Maslow A.H., (1943), A theory of human motivation, Psychological Review, 50(4), 370–96.

Master schedule	A schedule of dates that shows only activities and milestones from the master network.
Matrix organisation More: – Encyclopaedia	The matrix organisation gets its name from the fact that projects and programmes cross business-as-usual departments to form a matrix. At the intersections of the matrix are the staff who constitute the resources of both projects, programmes and business-as-usual. Broadly speaking there are three types of matrix organisation: weak, balanced and strong. These principally apply to projects where the departmental resources make up the delivery team but the same principles may apply to project and programme management teams.
Maximum resource limit	Some computer based resource scheduling methods allow for normal resource limits and maximum resource limits. If activities cannot be levelled within the normal resource limit, the scheduler is allowed to make use of extra resources up to the maximum resource limit.
McGregor More: – Encyclopaedia	Douglas McGregor is most famous for his Theory X and Theory Y as described in his book 'The Human Side of Enterprise'[16]. McGregor identified two extreme views of leadership. Theory X managers assume that people fundamentally dislike work and need authoritarian leadership. Theory Y managers assume that people can be ambitious and self-motivated and see their role as developing each individual's potential.
Mean cost	The probable cost of an activity as calculated from the optimistic, pessimistic and most likely estimates. In PERT analysis the mean cost is calculated using a beta distribution.
Mean duration	The probable duration of an activity as calculated from the optimistic, pessimistic and most likely estimates. In PERT analysis the mean cost is calculated using a beta distribution.
Merge bias	The additional risk that may arise at the points where parallel paths meet in a network diagram.
Merge event	An event in an activity on arrow network which has more than one activity leading into it.

[16] McGregor D., (1960), The Human Side of Enterprise, McGraw-Hill, New York.

Milestone

More:

– Encyclopaedia

Milestones are useful as a means of focusing on important events within a schedule. They can serve a number of purposes, such as:

- creating initial high level schedules during the identification phase of a project or programme;
- facilitating summary schedules for communication with stakeholders during the delivery phase;
- highlighting inter-dependencies between projects within a programme schedule.

Milestone definition sheet

A sheet that records the details of a milestone, including description, forecast and actual dates, acceptance criteria etc.

Milestone plan

Milestone plans can take a number of different forms. In the early stages of a project, before any detailed scheduling has been done, a milestone plan may be drawn to show the key deliverables of the project and their relationship.

Once a detailed network diagram incorporating the milestones has been developed, a Gantt chart containing only milestones may be the best format.

Milestone schedule

A schedule of dates that shows only milestones. Typically this is used to communicate progress to senior stakeholders.

Milestone slip chart

A form of milestone plan that shows changes in the schedule dates of milestones from one progress update to the next. Useful for seeing trends in progress.

Minimum viable product (MVP)

A version of a product that has the core features that enable it to be deployed by early adopters. It provides a high return on investment and reduces risk.

It can be viewed as a working prototype that is delivered to early adopters.

Mitigation

The process of taking action to counter the effect of identified threats, i.e. the implementation of risk responses.

Mobilisation

More:

- Knowledge
- Competence
- Capability maturity

Mobilisation makes sure that appropriate organisational and technical infrastructures are in place for acquiring and deploying resources. It also ensures that these are demobilised when no longer required.

The goals of mobilisation are to ensure that:

- capital assets are operational and accessible;
- facilities are operational and accessible;
- delivery team members are competent and capable;
- resources are redeployed, returned or disposed of, when no longer required.

The APM BoK also has a function for mobilisation. Neither the PMBoK® guide, ISO21500 nor PRINCE2 directly address the issues covered by mobilisation and demobilisation.

Monitor and Control Project Work (4.4)

This is the high level integration process that co-ordinates performance information from the more detailed processes in the monitoring and controlling process group and develops recommendations that are then input to Perform Integrated Change Control.

In ISO21500 the equivalent process is Control project work.

PRINCE2 defines processes that manage the delivery of the project in a different way. At a broad level a combination of the Direct and Manage Project Work, Monitor and Control Project Work and Perform Integrated Change Control processes from the PMBoK® guide is equivalent to the Controlling a Stage (CS) and Managing Product Delivery (MP) processes in PRINCE2.

Praxis takes a similar approach to PRINCE2 and the corresponding combination is formed of the delivery and development processes.

Monitoring and controlling process group (PMBoK® guide)

A PMBoK® guide process group that includes the processes involved in tracking progress and taking action where necessary. These processes can be applied at different levels with the project, i.e. for the project as a whole or for a stage or sub-project.

When viewed from the perspective of the project life cycle, these processes are covered in Praxis by the delivery process and development process.

In PRINCE2 the equivalent processes at the project life cycle level are Controlling a Stage (CS) and Managing Product Delivery (MP).

The equivalent ISO21500 process group is called simply – controlling.

Montana and Charnov

More:

- Encyclopaedia

Patrick Montana and Bruce Charnov[17] set out seven forms of power involved in leadership and influencing in an organisational setting.

Monte Carlo analysis

More:

- Encyclopaedia

Monte Carlo analysis uses a three point estimate of the duration for each activity in a network diagram. It then performs multiple critical path analyses to arrive at a range of probabilities for a project schedule.

Morgan

More:

- Encyclopaedia

In his book 'Images of Organisation', Gareth Morgan[18] identifies eight organisational metaphors.

These metaphors can help understand the nature of an organisation and the best way to manage change within it. Each type of organisation will respond to change in a different way and business change managers in particular need to be sensitive to these different needs.

MoSCoW prioritisation

More:

- Encyclopaedia

A form of prioritisation that classifies objectives as: 'must have', 'should have', 'could have' and 'would like to have'. Some sources suggest the 'W' stands for 'Won't have'.

Most likely cost

The most likely estimate of cost for use in PERT/ Cost.

Most likely duration

The most likely estimate of an activity's duration for use in PERT analysis or Monte Carlo analysis.

Mourning

A final additional stage of the Tuckman model where team members may suffer a feeling of loss due to the adjourning of the team.

MSP processes

See transformational flow

[17] Montana, Patrick J., and Charnov, Bruce H., (2008), Management, Barron's Educational Series, Hauppauge, New York.

[18] Morgan, G (1986), Images of Organisation, Sage, Thousand Oaks, CA.

MSP themes

MSP themes are aspects of programme management that must be managed throughout the programme life cycle.

- Programme organization
- Vision
- Leadership and stakeholder engagement
- Benefits management
- Blueprint design and delivery
- Planning and control
- The business case
- Risk and issue management
- Quality and assurance management

These support the MSP transformational flow which provide a structure to implement the themes.

In Praxis the equivalent type of material is contained in the knowledge functions although they are much more comprehensive.

Must finish on

A type of imposed date specifying that an activity must finish on the specified date.

If all previous activities cannot be completed in time this would lead to a path with negative float.

The GAO SAG refers to this with the acronym MFON

Must start later than

A form of imposed start date indicating that an activity must start after the specified date.

Must start on

A type of imposed date specifying that an activity must start on the specified date.

If all previous activities cannot be completed in time this would lead to a path with negative float.

The GAO SAG refers to this with the acronym MSON

Near critical activity

An activity with little float that could become part of the critical path with a slight delay. This could potentially make a significant change to the sequence of activities that form the critical path.

Near critical activities should be monitored closely. What is classed as 'near' is up to those managing the project. It will depend upon the general length of activities and volatility of the schedule.

Negative float

Where a path in a network diagram becomes supercritical the activities on that path have float of less than zero, i.e. negative float. The quantity of float then indicates the amount of time that must be picked up in order to achieve an imposed date.

Negotiation

More:

- Knowledge
- Competence

Negotiation is a collective term for various mechanisms that seek to resolve differences between individuals, groups or companies. Its goals are to:

- find solutions to issues involving two or more parties;
- develop beneficial relationships between two or more parties.

The principles of negotiation are used in many different contexts. Two obvious applications are in conflict management and procurement.

The APM BoK also includes the negotiation function. It is not a subject covered by PRINCE2 or ISO21500. The PMBoK mentions it briefly as a tool used in the Acquire Project Team and Conduct Procurements processes.

Net cash flow

In discounted cash flow techniques this is the net income/expenditure in a particular year that is multiplied by the relevant discount factor to give the discounted cash flow, i.e. the value of a future year's net income or expenditure at today's prices.

Net present value

The present value of a future income less the initial capital investment.

Network analysis

A generic term for the various techniques of analysing network diagrams including PERT/Time, PERT/ Cost, Monte Carlo analysis and critical path analysis.

Network diagram

More:

- Encyclopaedia

Networks diagrams are, in effect, method statements in pictorial form. They represent the way that activities will be performed in order to achieve the objectives. These techniques were first used in the 1950's and variants were simultaneously developed on both sides of the Atlantic.

There are two main formats for preparing a network diagram: activity-on-node (the most common form of which is the precedence diagram) and activity-on-arrow. Both formats achieve the same result but since 1985 precedence has become by far the more widely used, mainly due to the widespread use of scheduling software.

Network path

A sequence of interconnected activities in a network diagram.

Node

A generic term for events in an activity on arrow diagram and activities in a precedence diagram.

Nominal group technique More: – Encyclopaedia	A form of collective decision making. There are numerous situations where a P3 manager needs to collate ideas from a group of individuals and arrive at a decision. It may be a group of stakeholders discussing benefits, a project team identifying major risks or a technical team debating alternative technical solutions.
Nonaka and Takeuchi More: – Encyclopaedia	Ikujiro Nonaka and Hirotaka Takeuchi[19] set out their spiral model of knowledge management in 1995. Sometimes known as the 'SECI model' it addresses the links between tacit and explicit knowledge and illustrates how knowledge is expanded and enhanced through the process of converting tacit knowledge to explicit knowledge and back again.
Non-splittable activity	An activity that must not be split during resource limited scheduling.
Normal distribution	A statistical distribution that is symmetrical about the mean. The project duration calculated by PERT analysis is assumed to be the mean of a normal distribution. This enables ranges of completion dates and their probabilities to be calculated. For example, there is a 99.7% probability that a project will finish between ± 3 standard deviations from the mean.
Normal resource limit	The preferred limit for resource availability when performing resource levelling. See also maximum resource limit.
Norming	The third stage of team building in the Tuckman model.
Not earlier than	A form of imposed date placed on an activity that indicates that it may not start or finish earlier than the specified date.
Not later than	A form of imposed date placed on an activity that indicates that it may not start or finish later than the specified date.
Objectives	The objectives of a project or programme are what is required to be delivered. Objectives can be defined in terms of outputs, outcomes or benefits or any combination of the three.

[19] Nonaka, I., Takeuchi, H., (1995), The knowledge creating company: how Japanese companies create the dynamics of innovation, Oxford University Press, New York.

Off-specification	A PRINCE2 term that refers to a situation where a product does not (or is not forecasted to) meet the specification laid out in the product description. It is also used in the case of a missing product.
Operational costs	Costs expended on operational resources as opposed to those expended on capital investment.
Operations management	A function in the APM BoK that describes the management of business as usual. This is considered to be out of scope by the other guides.
Opportunity	A risk event that could have a positive effect on the project or programme. Historically, the term risk has usually been seen as possible threat to the objectives of the project or programme but uncertain events can also be potential opportunities which have their own set of opportunity responses.
Opportunity response	There are four ways of responding to an opportunity (positive risk event). These are: Exploit: Find a way of maximising the positive effect of the opportunity. Share: Work with a partner or supplier to maximise the positive effect of the opportunity. Enhance: Find a way of increasing the probability of the opportunity occurring or the impact it will have. Reject: Reject the opportunity as being unworthy of further action.
Optimistic cost	The optimistic estimate of cost for use in PERT/Cost.
Optimistic duration	The optimistic estimate of an activity's duration for use in PERT analysis or Monte Carlo analysis.
Optioneering	The comparison of cost estimates for different options in order to determine which is the best value.
OR relationship	A type of dependency link between activities in a probabilistic network. OR relationships can take two forms. An inclusive OR relationship is where any or all of the preceding or succeeding activities may occur. An exclusive OR relationship is where only one of the preceding or succeeding activities may occur.

Order of magnitude estimate

An initial high level estimate intended to give an indication of project cost. The precise meaning of order of magnitude varies widely but typically, it may represent a variance on the estimate of ±40%. This type of estimate is usually the first step in top down estimating.

Ordinal date schedule

Ordinal numbers are 1, 2, 3. Therefore ordinal dates would be day 1, day 2, day 3.

Cardinal numbers are 1st, 2nd, 3rd. Therefore, cardinal dates would be 1st February, 2nd February etc.

Sometimes a schedule is prepared using ordinal dates when a start date is not known. Starts and finishes are then expressed in terms of 'day 47' or 'week 17'.

Organisation management

More:

- Knowledge
- Competence
- Capability maturity
- Resources

Organisation management is concerned with creating and maintaining a management structure applicable to the project, programme or portfolio and the context in which it operates. Its goals are to:

- design an organisation appropriate to the scope of work to be managed;
- identify and appoint members of the management team;
- maintain and adapt the organisation throughout the life cycle.

In PRINCE2 the element of this topic that deals with the management team is covered by the organisation theme, in the PMBoK® guide it is the project human resource management knowledge area and in ISO21500 the resource subject group.

Organisation management plan

More:

- Description
- Templates

The organisation management plan sets out the preferred procedures, tools and techniques to be used in organisation management.

Organisational breakdown structure

A breakdown structure that shows a hierarchical representation of the management team and delivery team of a project, programme or portfolio.

Organisational Process Assets

An all-encompassing term used by the PMBoK® guide for a project's plans, processes, policies, procedures and knowledge bases.

Organization (PRINCE2 theme)

The organisation theme addresses the design and creation of the project management structure, including definition of roles and responsibilities.

This theme also covers stakeholder management.

Praxis has an organisation management topic and also a dedicated topic for stakeholder management.

In ISO21500 the equivalents are the resource and stakeholder subject groups. The PMBoK® guide equivalent knowledge areas are project human resource management and project stakeholder management.

Original duration

See baseline duration.

Out of sequence logic

The GAO SAG term for out of sequence progress.

Out of sequence progress

When an actual start date is entered against an activity that's predecessor has not yet been completed the progress is out of sequence with the logical dependencies.

Outcome

More:

- Knowledge

One of the three types of objective of a project or programme.

An outcome is a change in working practices that result from using an output. An outcome should lead to measurable benefits as it becomes part of business as usual.

Outline business case

In the first phase of the project life cycle, there will not be sufficient information available to develop a detailed business case. Typically, an outline business case will be included in a project brief. This should justify the project sufficiently to warrant the investment in more detailed planning.

In Praxis the outline business case is developed during the identification process, in PRINCE2 it is developed during the Starting Up a Project (SU) process.

Output

More:

- Knowledge

There are two common uses of the term:

Firstly, an output may simply be the output of a management process, e.g. the brief is an output of the identification process in Praxis.

Secondly, an output is one of three ways of defining the objectives of a project or programme. In this context it is a product or combination of products that are created by a project.

Output rate	Data that enables a planner to estimate the duration of an activity, e.g. cubic metres per hour for an excavator or bricks per hour for a bricklayer.
Overlap	See lead time and lag time.
Overload	The amount of resource required by the project schedule which exceeds the resource limit.
P2 process model	In Praxis the generic process model for both projects and programmes (hence P2) is based on life cycle phases with an additional process to address the sponsorship function. All these can, and should, be tailored to the specific context of the work. Each process is supported by competence and maturity definitions that remain relevant even if the Praxis process is replaced with a corresponding process from another guide such as PRINCE2 or MSP.
P3 assurance	The APM BoK topic that deals with assurance.
P3 management More: – Knowledge – Resources	Project, programme and portfolio management (P3M) is the application of methods, procedures, techniques and competence to achieve a set of defined objectives. The goals of P3 management are to: • deliver the required objectives to stakeholders in a planned and controlled manner; • govern and manage the processes that deliver the objectives effectively and efficiently. Investment in effective P3 management will provide benefits to both the host organisation and the people involved in delivering the work. It will: • increase the likelihood of achieving the desired results; • ensure effective and efficient use of resources; • satisfy the needs of different stakeholders.

P3 management framework

More:

- Video

Project, programme and portfolio (P3) management can be described as a framework of four interconnected elements:

- **Knowledge**: Describes the functions that make up the discipline of P3 management.
- **Method**: Describes the processes and documentation that are used to manage the life cycle
- **Competence**: Describes the knowledge and performance criteria required by individuals involved in P3 management.
- **Capability maturity**: Describes the attributes of an organisation as it progresses through 5 levels of capability and maturity.

Praxis addresses all four of these elements in a single integrated framework.

The PMBoK® guide and PRINCE2 cover knowledge and method. ISO21500 focusses on method.

Parallel life cycle

A life cycle where phases are conducted in parallel.

Parametric estimating

More:

- Encyclopaedia

This approach to estimating looks for parameters common to projects of a certain type. It calculates effort and cost for one project or programme based on parametric information from past, similar projects or programmes.

A more detailed example is function point analysis.

Pareto principle

More:

- Encyclopaedia

In 1906 Vilfredo Pareto observed that 80% of the land in Italy was owned by 20% of the population. The principle was adapted to quality management by Joseph Juran who observed that 80% of the faults in a system arise from 20% of the causes. It was Juran who is credited with coining the term 'the 80-20' rule. In P3 management this can be applied as a rule of thumb that helps the team focus on the 'vital few' in terms of stakeholders, risk events or suppliers to name but three.

Path

A sequence of activities in a network diagram that are connected by dependency links.

Path convergence

Where parallel sequences of activities in a network diagram come together in a single successor activity.

Path float

See shared float.

Payback method More: – Encyclopaedia	The payback method is one of the simplest forms of investment appraisal. It is most suited to projects of lower complexity in contexts where liquidity is important. The method is easy to apply and simple to communicate to stakeholders.
Payment methods More: – Encyclopaedia	Payment methods define the basis on which a client will pay a supplier for work done or goods or services provided. The main difference between methods is where the risk lies.
Peer review	A review of a project or programme that provides an independent assessment of the management processes and/or products. This kind of review forms part of the assurance function.
Percent complete	The amount of work that has been completed on an activity expressed as a percentage of the current estimate. It is used in conjunction with actual costs and actual effort to predict the eventual cost and duration of an activity. Poor estimation of percentage complete can lead to highly inaccurate progress reports.
Percent complete rule	See earning rules.
Perform Integrated Change Control (4.5)	Change control is often used just in relation to changes to the scope of a project. This PMBoK® guide process takes a broader view and deals with any request to modify a document, deliverable or baseline. In Praxis the change control function is focused on scope change control, albeit that requests to change scope impact many other aspects of the project. The fully integrated approach comprises change control, the more general control topic and the delivery process. In PRINCE2 the change theme and Controlling a Stage (CS) process achieve the same ends. In ISO 21500, the equivalent process is Control changes.
Perform Qualitative Risk Analysis (11.3)	The PMBoK® guide separates the analysis of risk events and overall risk into two processes – one for qualitative techniques and one for quantitative techniques (Perform Quantitative Risk Analysis). Both Praxis and PRINCE2 combine these in a single *assess* step in the risk management procedure. ISO21500 only has one risk analysis process – Assess risks. The text only explicitly refers to qualitative risk but it is reasonable to assume that quantitative risk analysis is implicit in this process.

Perform quality assurance (4.3.33)

This ISO21500 process audits quality requirements and the results from quality control measurements. It facilitates the improvement of quality processes and supports continuous improvement.

The equivalent in Praxis is the assurance function.

The equivalent in the PMBoK® guide is Perform Quality Assurance.

In PRINCE2 assurance is divided into quality assurance and project assurance. In simple terms project assurance provides confidence to stakeholders that the project is being conducted appropriately and properly while quality assurance does the same for the wider corporate or programme organisation.

Perform Quality Assurance (8.2)

This PMBoK® guide process audits quality requirements and the results from quality control measurements. It facilitates the improvement of quality processes and supports continuous improvement.

The equivalent in Praxis is the assurance function.

The equivalent in ISO21500 is Perform quality assurance.

In PRINCE2 assurance is divided into quality assurance and project assurance. In simple terms project assurance provides confidence to stakeholders that the project is being conducted appropriately and properly while quality assurance does the same for the wider corporate or programme organisation.

Perform quality control (4.3.34)

This ISO21500 process monitors and records the results of activities that assess performance. This applies to both the outputs of the project and the processes used to manage their delivery. It is conducted in accordance with the quality management plan.

The equivalent in the PMBoK® guide is Control Quality.

The Praxis approach sees quality as inherent in all aspects of P3 management rather than a separate topic. Therefore, all references to control (whether they refer to outputs or processes) are manifestations of quality control.

In PRINCE2 quality control is covered by a series of steps in the 'quality audit trail' in the quality theme.

Perform Quantitative Risk Analysis (11.4)

The PMBoK® guide separates the analysis of risk events and overall risk into two processes – one for quantitative techniques and one for qualitative techniques (Perform Qualitative Risk Analysis).

Both Praxis and PRINCE2 combine these in a single *assess* step in the risk management procedure.

ISO21500 only has one risk analysis process – assess risks. The text only explicitly refers to qualitative risk but it is reasonable to assume that quantitative risk analysis is implicit in this process.

Performance measurement baseline

The combined baselines for schedule, cost and scope against which performance will be tracked.

In Praxis these are part of the delivery documents, in PRINCE2 they are contained in the project initiation documentation and in the PMBoK® guide and ISO21500 they are part of the project management plan.

Performing

The fourth and final stage of team building in the standard Tuckman model.

Performing organisation

A term sometimes used to represent the company or organisation that is most directly involved in the provision of the resources that are performing the project.

PERT/ Cost

In the same way that the program evaluation and review technique (PERT) uses three estimates for the duration of an activity, PERT/Cost uses three estimates for the cost of an activity. The calculation is the same as that used in PERT but using money instead of time.

Pessimistic cost

The pessimistic estimate of cost for use in PERT/Cost.

Pessimistic duration

The pessimistic estimate of an activity's duration for use in PERT analysis or Monte Carlo analysis.

PESTLE analysis

More:

- Encyclopaedia

When assessing the context of a project, programme or portfolio there are many different aspects to consider. A common checklist of the external influences to consider comprises:

- Political.
- Environmental.
- Social.
- Technological.
- Legal.
- Economic.

Phase	The terms phase and stage are used to represent elements of the life cycle. Some authorities have stages as part of phases and others vice-versa. The approach taken in Praxis is that a phase represents an element in the project or programme life cycle. Phases represent parts of the life cycle that have different management needs and can therefore be performed by different management processes, e.g. the identification phase is managed using the identification process and the definition phase is managed using the definition process.
Phase budget	The budget for a specified phase of the project.
PI table	See probability/impact table.
Plan	A generic term used for a statement of intentions for a project or programme as a whole or for a specific aspect of a project such as a stage or sub-project. Plans generally take one of two forms: Management plans (e.g. risk management plan or quality management plan) explain how a particular aspect of the project will be managed. These are a statement of policy and intent that set the management standards for the project or programme. PRINCE2 uses the term strategy instead of plan in this context, e.g. risk management strategy. Delivery plans (e.g. a stage plan or a team plan) explain the content of a part of the project or programme for the purposes of day-to-day control.
Plan communications (4.3.38)	This ISO21500 process develops the communications plan which schedules activities concerned with stakeholder communication. In Praxis the equivalent communication plan is produced by the *plan communications* step in the stakeholder management procedure. Both the PMBoK® guide and PRINCE2 include the timing of communications activities with the policies and procedures of communications management. The PMBoK® guide produces its communications management plan in Plan Communications Management and the PRINCE2 equivalent is the Prepare communications management strategy activity in the Initiating a Project (IP) process.

Plan Communications Management (10.1)

This PMBoK® guide process develops the communications management plan that describes the policies, procedures and documents that will be used when engaging with stakeholders.

In Praxis the equivalent document is the stakeholder management plan which is produced during the *prepare governance documents* activity in the definition process.

The tools and techniques of this PMBoK® guide process explain communications models and in Praxis and the APM BoK these are covered by the communication function.

The PRINCE2 equivalent is the Prepare communications management strategy activity in the Initiating a Project (IP) process.

ISO21500 has a Plan communications process but this is aimed more at planning the actual communications activities rather than policies and procedures which are covered in general terms by Develop project plans.

Plan Cost Management (7.1)

This PMBoK® guide process develops the cost management plan that describes the policies, procedures and documents that will be used to monitor and control project costs.

In Praxis the equivalent document is the financial management plan which is produced during the *prepare governance documents* activity in the definition process. The main difference is that the Praxis document allows for income as well as expenditure.

PRINCE2 does not have cost specific procedures and simply refers to the management of costs in themes and processes throughout the method.

In ISO21500 policies and procedures relating to cost management are covered in general terms by Develop project plans.

Plan Human Resource Management (9.1)	This PMBoK® guide process develops the human resource management plan that describes the policies, procedures and documents that will be used to manage the project team. In Praxis the equivalent documents are the organisational management plan for the management team and the resource management plan for the delivery team which are produced during the *prepare governance documents* activity in the definition process. The nearest equivalents in ISO21500 are the general references to management planning in Develop project plans and the specific creation of staff assignments and contracts in Establish project team. PRINCE2 provides a management team structure and roles in the organization theme but does not go into detail on policies and procedures for the management of delivery resources.
Plan Procurement Management (12.1)	This PMBoK® guide process develops the procurement management plan that describes the policies, procedures and documents that will be used to manage the procurement of goods and services. In Praxis the equivalent document is the resource management plan which is produced during the *prepare governance documents* activity in the definition process. The equivalent process in ISO21500 is Plan procurements. PRINCE2 does not contain specific procurement processes.
Plan procurements (4.3.35)	This ISO21500 process develops the procurement management plan that describes the policies, procedures and documents that will be used to manage procurement of goods and services. In Praxis the equivalent document is the resource management plan which is produced during the *prepare governance documents* activity in the definition process. The equivalent process in the PMBoK® guide is plan procurement management. PRINCE2 does not contain specific procurement processes.

Plan quality (4.3.32)

This ISO21500 process develops the quality plan that describes the policies, procedures and documents that will be used to manage the quality of both the project deliverables and the project management processes.

Praxis takes the view that quality is not a separate topic but is inherent in all planning and control related topics, procedures and documents.

The PMBoK® guide equivalent is Plan Quality Management, which develops the quality management plan.

The equivalent in PRINCE2 is the Prepare quality management strategy activity in the Initiating a Project (IP) process.

Plan Quality Management (8.1)

This PMBoK® guide process develops the quality management plan that describes the policies, procedures and documents that will be used to manage the quality of both the project deliverables and the project management processes.

Praxis takes the view that quality is not a separate topic but is inherent in all planning and control related topics, procedures and documents.

The ISO21500 equivalent is Plan quality, which develops the quality plan.

The equivalent in PRINCE2 is the Prepare quality management strategy activity in the Initiating a Project (IP) process.

Plan Risk Management (11.1)

This PMBoK® guide process develops the risk management plan that describes the policies, procedures and documents that will be used to manage risk throughout the project.

In Praxis the equivalent document is the risk management plan that is produced during the *prepare governance documents* activity in the definition process.

In ISO21500 policies and procedures relating to risk management are covered in general terms by Develop project plans.

The equivalent in PRINCE2 is the Prepare risk management strategy activity in the Initiating a Project (IP) process.

Plan Risk Responses (11.5)

This PMBoK® guide process evaluates the identified risk events (both threats and opportunities) and decides how best to respond to them. The project management plan will be updated accordingly.

The equivalent in Praxis is the *plan risk responses* step in the risk management procedure; In PRINCE2 it is the plan step in the risk theme; in ISO21500 it is Treat risks.

Plan Schedule Management (6.1)	This PMBoK® guide process develops the schedule management plan that describes the policies, procedures and documents that will be used to manage schedules throughout the project. In Praxis the equivalent document is the schedule management plan that is produced during the *prepare governance documents* activity in the definition process. In ISO21500 policies and procedures relating to scheduling are covered in general terms by Develop project plans. PRINCE2 does not have an equivalent document but there are many common elements in the *design the plan* step in the plans theme.
Plan Scope Management (5.1)	This PMBoK® guide process develops the scope management plan that describes the policies, procedures and documents that will be used to manage scope throughout the project. In Praxis the equivalent document is the scope management plan that is produced during the *prepare governance documents* activity in the definition process. In ISO21500 policies and procedures relating to scope management are covered in general terms by Develop project plans. PRINCE2 does not have an equivalent document but there are many references to how scope many be managed throughout the method.
Plan Stakeholder Management (13.1)	This PMBoK® guide process develops the stakeholder management plan that describes the policies, procedures and documents that will be used to manage stakeholders throughout the project. In Praxis the equivalent document is the stakeholder management plan that is produced during the *prepare governance documents* activity in the definition process. In ISO21500 policies and procedures relating to stakeholder management are covered in general terms by Develop project plans. The closest equivalent in PRINCE2 is the communications management strategy.

Plan the initiation stage	An activity from the PRINCE2 Starting Up a Project (SU) process that plans the execution of the initiation stage of the project. The equivalent in Praxis is the *prepare definition plan* in the identification process. Neither ISO21500 nor the PMBoK® guide have a formal approach to stages built into their processes. The equivalent planning for a stage of a project would simply be the application of the initiating and planning processes at stage level instead of project level.
Plan the next stage	This PRINCE2 activity from the Managing a Stage Boundary (MP) process is triggered as the current stage nears its end. Its output is the next stage plan which will be used to help the project board decide whether or not to approve the next stage. The equivalent in Praxis is the *plan next stage/tranche* activity in the boundaries process which works for both project stages and programme tranches. Neither ISO21500 nor the PMBoK® guide have a formal approach to stages built into their processes. The equivalent planning for a stage of a project would simply be the application of the initiating and planning processes at stage level instead of project level.
Planned cost	See baseline cost.
Planned duration	See baseline duration.
Planned expenditure	See baseline cost.
Planned finish date	Generally used synonymously with the baseline finish date.
Planned start date	Generally used synonymously with the baseline start date.
Planned value	See budget cost of work scheduled.

Planning

More:

- Knowledge
- Resources

Planning determines what is to be delivered, how much it will cost, when it will be delivered, how it will be delivered, who will carry it out and how all this will be managed. It occurs broadly at two levels: governance and delivery.

The goals of management plans used in governance are to:

- describe the principles that should be used to manage the work;
- provide consistency with flexibility across multiple projects and programmes.

The goals of delivery plans are to:

- describe the objectives of the project, programme or portfolio;
- define the work required to achieve the objectives and describe how it will be performed;
- estimate the resources and finance needed to perform the work;
- document the plans and update them throughout the life cycle.

The APM BoK has a similar planning function.

In PRINCE2, delivery planning is covered by the plans theme. Most management planning is included in the Initiating a Project (IP) process.

In the PMBoK® guide both management and delivery planning are covered by the processes in the planning process group. In ISO21500 the equivalent is also the planning process group.

Planning (ISO21500)

The most extensive process group in ISO21500 containing 16 processes, from nine of the ten subject groups. These processes can be applied at different levels with the project, i.e. for the project as a whole or for a stage or sub-project.

When viewed from the perspective of the project life cycle, these processes are covered in Praxis by the definition process. More detailed planning is covered by the planning function and the *plan* step of individual functional procedures.

In PRINCE2 the equivalent process at the project life cycle level is Initiating a Project while the details of planning are covered in the plans theme.

The equivalent in the PMBoK® guide is the planning process group.

Planning and control (MSP theme)	MSP brings the functions of planning and control together into a single theme. This theme explains how planning and control of all aspects of a programme should be conducted.
Planning horizon	The time period for which it is practical to plan accurately. This is the boundary between detailed and outline planning in rolling wave planning.
Planning package	Packages of work that are not yet well enough defined to be classed as a work package. These are usually used to define the future work in rolling wave planning.
Planning process group (PMBoK® guide)	The most extensive process group in the PMBoK® guide containing 24 processes, from all ten knowledge areas. These processes can be applied at different levels with the project, i.e. for the project as a whole or for a stage or sub-project. When viewed from the perspective of the project life cycle, these processes are covered in Praxis by the definition process. More detailed planning is covered by the planning function and the *plan* step of individual functional procedures. In PRINCE2 the equivalent process at the project life cycle level is Initiating a Project while the details of planning are covered in the plans theme. The equivalent ISO21500 process group is called simply – planning.
Plans (PRINCE2 theme)	The plans theme covers the preparation of delivery plans at various levels and with specific purposes, e.g. project plan, team plan and exception plan. It focuses on product-based planning and the creation of schedules. Praxis covers this in the planning and schedule management functions. In ISO21500 the equivalent subject area is time and in the PMBoK® guide the equivalent knowledge area is project time management.
PMBoK® guide	Often referred to simply as the PMBoK® guide the full title of this ANSI standard produced by the Project Management Institute is *A Guide to the Project Management Body of Knowledge*. The significance of this title is often missed. The PMBoK® guide is not the complete body of knowledge, it is a *guide* to the body of knowledge.

PMO

More:

- Encyclopaedia

The acronym PMO can stand for Project Management Office, Programme Management Office or even Portfolio Management Office.

In order for an organisation to achieve the higher levels of capability maturity it needs to have a central focus for the discipline and profession of P3 management. Somewhere in the organisation there should be a body that has overall responsibility for developing and maintaining standards, development of P3 managers and staff and continuous improvement of project, programme and portfolio delivery.

Typically, this is called a PMO.

Policy

A principle or course of action adopted by an organisation that sets the tone for the culture of the organisation.

Praxis uses the existence of policies as an indicator of level 2 capability maturity in accordance with the CMMI® approach.

Pool resource

Depending upon the computer package being used, this could be equivalent to a skill group or a consumable resource.

Portfolio

More:

- Knowledge

Praxis defines two types of portfolio.

A 'standard portfolio' comprises a set of independent projects and/or programmes. The main objective of co-ordinating a standard portfolio is to ensure that the component projects and programmes are managed in a consistently effective way. An example of a standard portfolio would be a construction firm's portfolio of separate building contracts for separate clients.

A 'structured portfolio' comprises a set of projects and/or programmes that are united by a set of common strategic objectives. Structured portfolios have many more inter-relationships between the component projects and programmes and governance must be more rigorous. An example of a structured portfolio would be an organisation that repeatedly implemented the objectives of its strategic planning cycle through a rolling portfolio life cycle.

Portfolio Management Office

See PMO.

Portfolio process model

More:

- Method

A series of processes aimed at managing both standard and structured portfolios. The model includes four processes:

- Initiation process.
- Governance process.
- Management process.
- Co-ordination process.

Possessions

Period where a project needs to take over a business as usual environment and stop normal operational activity. This could be a road, production line or computer system.

Post control

A form of control that reviews what has occurred with the intention of learning lessons for the future. In the project and programme context, this is performed as parts of reviews such as a post project review or post programme review.

Post control also occurs at various points within the life cycle where reviews such as an end stage assessment conducted.

Post implementation review

A review 6-12 months after a product has become operational to see that the project (or programme) has met its objectives and the outputs continue to meet user requirements.

Post programme review

A review of the management of a programme for the purposes of improving future processes.

Post project appraisal

See post project review.

Post project review

A post project review is a structured audit and review of how the project went. Its output is a report that provides learning points for the future including recommendations for process improvement and training.

Post-project review plan

Since post-project reviews are conducted after the project management team has been disbanded, there is a risk that the review will never happen because people are committed to new projects. The post-project review plan reduces this risk by nominating those who will perform the review, specifying when it will be held and defining its scope.

Praxis Framework

More:

- Web site

A P3 management framework that covers all four elements of knowledge, method, competency and capability maturity.

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Precedence diagram More: – Encyclopaedia	In precedence diagrams the basic building block that represents an activity is a box (or node). Activity boxes are linked to show the sequence in which the activities will be performed.
Precedence diagram method	See precedence diagram.
Precedence network	See precedence diagram.
Precedence relationships	See dependencies.
Preceding activity	See predecessor.
Preceding float	See start float.
Predecessor	An activity which logically precedes another.
Preliminary estimate	A high level estimate of time and/or costs made early in the project life cycle. Preliminary estimates are usually parametric or comparative.
Prelims	A contraction of the word 'preliminaries' used predominantly in the UK construction industry to indicate overhead costs. Generally referred to as site overheads in the US.
Premature closure	A project or programme should be terminated if it can no longer meet the terms of its business case. This is referred to as premature closure because the natural conclusion of the project or programme has not been reached.
Prepare planned closure	In PRINCE2 it is the project manager's responsibility to ensure that the expected objectives have been achieved and delivered. Only then can a recommendation be made to the project board that the project be closed. This activity from the Closing a Project (CP) process covers the preparation for the recommend project closure activity.
Prepare premature closure	In PRINCE2 the project board may instruct the project manager to close a project before it has achieved its objectives. This is usually because the business case is no longer viable. In such circumstances the project manager should salvage any value possible from the work completed to date and ensure the project board understand the consequences of the premature closure. Only then can the closure recommendation be issued.

Prepare the communication management strategy

The activity in the PRINCE2 Initiating a Project (IP) process that ensures a document is prepared that plans how communications will be implemented.

Since communications are primarily with stakeholders, Praxis covers this as part of the stakeholder management plan with the administrative aspects covered in the information management plan.

PMBoK® guide refers to this document as the communications management plan and ISO21500 refers to it as the communications plan.

Praxis prepares this guidance in the *planning* step of stakeholder management and information management procedures, the PMBoK® guide in the Plan Communications Management process and ISO21500 in the Plan communications process.

Prepare the configuration management strategy

The activity in the PRINCE2 Initiating a Project (IP) process that ensures a document is prepared that plans how the configuration will be managed.

Praxis covers this in the *planning* step of configuration management that prepares a configuration management plan.

Both PMBoK® guide and ISO21500 mention a configuration management plan but do not have a specific process to create it. It would normally be prepared as part of Develop Project Management Plan in the PMBoK® guide and Develop project plans in ISO21500.

Prepare the outline business case

An activity from the PRINCE2 Starting up a Project (SU) process which develops a high level business case sufficient to justify investment in the Initiating a Project (IP) process.

This is subsequently refined in the refine the business case activity which takes the outline version and updates and extends it to form a full business case.

In Praxis this expansion of the business case is covered by the *consolidate definition documentation* activity in the definition process.

The PMBoK® guide and ISO21500 do not have a similar two stage process for the development of the business case.

Prepare the quality management strategy	The activity in the PRINCE2 Initiating a Project (IP) process that ensures a document is prepared that plans how quality will be managed. Praxis doesn't specify a dedicated quality management plan. It takes the approach (first promoted by ISO10500) that quality planning is implicit in all planning activity. The PMBoK® guide develops the quality management plan in the Plan Quality Management process and ISO21500 mentions it as part of the project management plan produced by Develop project plans.
Prepare the risk management strategy	The activity in the PRINCE2 Initiating a Project (IP) process that ensures a document is prepared that plans how risk will be managed. Praxis covers this in the *planning* step of risk management that prepares a risk management plan. The PMBoK® guide develops the risk management plan in the Plan Risk Management process and ISO21500 mentions it as part of the project management plan produced by Develop project plans.
Present value	An investment appraisal techniques that calculates the value of future income at today's date. Future income is discounted using discount rates that take account of the effect of inflation. The result enables the comparison of alternative investments with different periods of return.
Preventive action	A deliberate action taken in advance to ensure performance stays in line with agreed baselines. Preventive action is proactive whereas corrective action is reactive.
Prime contractor	A contractor who is responsible for most or all of the work on a project and manages sub-contractors on behalf of the client.
PRINCE2	PRojects IN Controlled Environments is a project management methodology published by Axelos Ltd. a joint venture company between the UK Government's Cabinet Office and Capita plc. PRINCE2 is not designed to cover the detailed tools and techniques used in managing projects. What it is designed to do is provide a consistent and well-structured methodology based on the project life cycle.
PRINCE2 Agile	A guide published by Axelos Ltd. that shows in detail how PRINCE2 can be used in conjunction with agile development methods.

PRINCE2 principles

PRINCE2 defines seven principles, which all aspects of the method are designed to achieve. These are:

1. Continued business justification.
2. Learn from experience.
3. Defined roles and responsibilities.
4. Manage by stages.
5. Manage by exception.
6. Focus on products.
7. Tailor to suit the project environment.

PRINCE2 is often criticised for being prescriptive and bureaucratic. This is usually because people don't read the chapter relating to the seventh principle.

PRINCE2 processes

PRINCE2 addresses the management of the project life cycle using seven processes:

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

PRINCE2 themes

PRINCE2 themes are aspects of project management that must be managed throughout the project life cycle.

- Business Case
- Organisation
- Quality
- Plans
- Risk
- Change
- Progress

These support the PRINCE2 processes which provide a structure to implement the themes.

In Praxis and the APM BoK the equivalent type of material is contained in the knowledge functions, albeit that these guides are much more comprehensive.

The equivalents in the PMBoK® guide are the knowledge areas and in ISO21500 the subject groups.

Prioritise

The phase of a portfolio life cycle where priorities are set for the objectives of the portfolio.

In Praxis, this phase is managed as part of the portfolio management process.

Probabilistic branching

Using this term, the GAO SAG briefly explains techniques that achieve some of the objectives of probabilistic networks using conventional scheduling software.

This enables some probabilistic analysis to be performed even when the software being used doesn't support probabilistic dependencies.

Probabilistic dependencies

Dependency links between activities in a network diagram that model alternative sequences of logic. These include:

- Inclusive OR dependency.
- Exclusive OR dependency.

Probabilistic networks

More:

- Encyclopaedia

Normal precedence and activity on arrow networks are known as deterministic networks. This is because the sequences of activities are determined by the person constructing the network. No allowance is made for alternative courses of action as the project progresses.

Multiple dependencies in deterministic networks only have one combined effect, known as an AND relationship. This simple assumption is not always sufficient to accurately model the true situation. Probabilistic dependencies provide the means of modelling much more complex relationships between activities.

Probability

Usually used in the context of risk as a measure of the chance that a risk event may occur.

Probability chart

A chart showing the probability of an instance occurring. For example, following Monte Carlo analysis, a probability chart would show the probability of multiple project completion dates.

Probability-impact assessment

More:

- Encyclopaedia

Every risk event, whether it is a threat or an opportunity, has two characteristics: the probability that it might happen and the impact it would have if it did happen.

Even on the simplest of projects, risk events should be assessed for their probability and impact using a scale such as high, medium and low. As the complexity of the work increases, the sophistication of the assessment should increase.

A thorough assessment of risk events for projects of higher complexity and for programmes would have a five point scale with guidelines and numerical values for each point on the scale.

Probability-impact grid

See probability-impact table.

Probability-impact scores

The probability and impact of a risk event can be given values that are relative (e.g. high, medium, low) or numeric scores (e.g. 0.05 to 0.95)

Using numeric scoring has a number of advantages:

- Risk events can be aggregated by elements of the work breakdown structure.
- Tolerances for risk can be set.
- Alternative strategies can be compared.
- Trends in changing risk can be identified once the project is underway.

Probability-impact table

A tool used for qualitative risk analysis which comprises a matrix of risks with estimated probabilities on one axis and impacts on the other.

References to individual risk events are placed in the matrix and the resulting distribution provides a visual representation of where the bulk of risk lies on both the probability and the impact axes.

Procedure

The terms procedure and process are common throughout all guides to project management.

In common English they are often used interchangeably but there are two key differences.

- A procedure is normally more detailed than a process.
- A procedure is more linear and not as focused on inputs and outputs as a process.

The PMBoK® guide and ISO21500 define all management activity as processes regardless of the level of detail. In the PMBoK® guide all processes describe tools and techniques that convert inputs into outputs. ISO21500 processes do not define tools and techniques.

Praxis and PRINCE2 use both terms. Process is used when describing the activities that manage a phase of the life cycle, such as the definition process in Praxis or the Starting Up a Project (SU) process in PRINCE2.

Procedure is used when describing the steps used to perform a function such as risk management or stakeholder management.

Process

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Process groups (PMBoK® guide)

See project management process groups.

Procurement

More:

- Knowledge
- Competence
- Capability maturity
- Resources

Procurement covers the acquisition from a supplier of the products and services required for completion of a project, programme or portfolio. Its goals are to:

- identify potential external suppliers;
- select external suppliers;
- obtain commitment to provision of internal resources.

An 'external source' represents any supplier from outside the host organisation. 'Internal sources' are departments or divisions within the host organisation.

Procurement (ISO21500 subject group)

An ISO21500 subject group that provides a set of processes for managing procurement. The processes comprise:

- Plan procurements.
- Select suppliers.
- Administer procurements.

The equivalent in Praxis is the procurement and contract management functions.

PRINCE2 doesn't go into any detail on the procurement of external products and services.

The PMBoK® guide and ISO21500 share a very similar structure and the nearest equivalent knowledge area in the PMBoK® guide is project procurement management.

Procurement management plan

The procurement management plan sets out the preferred procedures, tools and techniques to be used in procuring products and services.

Procurement statement of work

A PMBoK® guide term for a statement of work of an item or work package that will be subject to procurement.

In Praxis this would simply be a specification attached to any bidding documents.

Procurement strategy

The APM PSMC term for a procurement management plan.

Produce an exception plan	If a PRINCE2 project stage is outside, or forecast to be outside, its agreed tolerances, then an issue must be escalated to the project board. The project board may request that an exception plan be prepared to show how the issue may be dealt with. This activity covers the production of this plan. Praxis addresses this in the *corrective action* activity in the delivery process. The nearest equivalent in the PMBoK® guide and ISO21500 is the more general term: corrective action. Poor performance on a project may result in a change request for corrective action but since the PMBoK® guide and ISO21500 do not have the formal organisational relationships as PRINCE2, there is no equivalent 'exception' mechanism.
Producer	The name PRINCE2 gives to the person or group responsible for developing a product. The term is normally used in the context of a quality review.
Product	A self-contained component of a project's output. Each product will have a set of acceptance criteria and is only recorded as complete when a quality review confirms that the acceptance criteria have been met. Some products may be delivered for use and therefore referred to as a deliverable. Some may be gathered together to create a work package that is delegated to an individual, team or supplier. The PRINCE2 definition goes further and stipulates that a product may be an input or an output, tangible or intangible, that can be described, created and tested. In PRINCE2 there are management products and specialist products.
Product backlog	See backlog.
Product breakdown structure	The PRINCE2 term for a breakdown structure that breaks down the products of a project into increasing levels of detail.
Product checklist	The PRINCE2 term for a list of the products contained in the product breakdown structure.
Product code	The code given to a product that denotes its position in a product breakdown structure.

Product description

In Praxis and PRINCE2 this document describes the purpose, form and components of a product. The product description should be used as the basis for acceptance of the product by the customer.

In the PMBoK® guide this is known as the product scope description.

Product documents

More:

- Method

The extent and detail of product documentation is very dependent upon the context of the work. Rather than prescribe separate documents, Praxis provides a list of fields from which suitable documents should be constructed according to the needs of the project or programme. This may result in a simple approach with one document per product or a more extensive approach with separate documents for product descriptions, configuration items and quality records.

- Product description.
- Configuration item record.
- Product status account.
- Quality register.
- Project product description.

Product flow diagram

A PRINCE2 planning tool that shows the sequence in which the products of a project are developed.

Product life cycle

More:

- Knowledge

The complete life cycle of a product, from its development via a project life cycle, through its operation and eventual disposal.

If expressed in the form of the Praxis generic project life cycle, the product life cycle has two additional phases covering the period that the output of a project is operated and the its final disposal.

Product scope

A PMBoK® guide term for the features and functions that characterise a product.

Product scope description

A PMBoK® guide term for the description of the features and functions that characterise a product.

In Praxis and PRINCE2 this is known as the product description.

Product status account

Status accounting is a component of configuration management. In PRINCE2 a status report on all, or a selection of, the project's products is called a product status account.

Product-based planning	This is the approach to planning recommended by PRINCE2. It first involves the development of a product breakdown structure and a product description for each product. The sequence of product development is then shown in a product flow diagram. Activities are then identified as the work needed to transform one product into the next.
Product-based work breakdown structure	A term sometimes used to explicitly represent a work breakdown structure made up of products rather than activities.
Product-based work breakdown structure	See work breakdown structure.
Professionalism More: – Knowledge – Resources	There is a constant and often heated debate within the community about whether P3 management is a profession or not. Those who argue against it are talking about a Profession with a capital 'P' where 'Professionals' need a licence to practice and can be sued for negligence. Doctors, Lawyers, Accountants amongst others fall into this category of Professional. This debate is largely academic. What is important is the attitude of people who manage projects, programmes and portfolios. In Praxis the professionalism function is sub-divided into: • Communities of practice. • Competence. • Ethics. • Learning and development. The APM BoK has an almost identical function but this is not an area covered in detail in any of the other guides.
Program	In most cases the British English (programme) and American English (program) are synonymous. However, the GAO SAG only uses the term program in the context of a project schedule rather than a collection of projects managed in a co-ordinated way.

Program evaluation and review technique (PERT)

More:

- Encyclopaedia

The program evaluation and review technique (PERT) was developed for the Polaris project in 1956. It is based on the idea of estimating three durations for each activity rather than the single estimate used in critical path analysis. It bears no relation to the current use of the term programme in the context of programme management.

In PERT analysis three estimates are made for each activity:

- Optimistic (very unlikely that the activity will take shorter than this).
- Pessimistic (very unlikely that the activity will take longer than this).
- Most likely (this is what we really think it will take).

These durations are assumed to lie on a beta distribution. A mean duration is calculated and used in a critical path analysis. The project end date is then assumed to lie on a normal distribution and potential end dates can be calculated for various standard deviations from the mean.

Programme

More:

- Knowledge

The term programme has different meanings to different people. Historically, the term has been used to describe a simple bar chart and this is still in common use in many industries (e.g. construction).

In other fields it is now generally accepted that a programme is a collection of projects managed in a co-ordinated way to create benefits for the host organisation.

Programme and project support office (PPSO)

An organisation set up to provide combined programme support and project support. This could be a team set up for the support of a specific programme and its projects or an organisation-wide team that supports all the projects and programmes in a portfolio.

Programme assurance

See assurance.

Programme board

In MSP this is a group that is established to assist the Senior Responsible Owner (SRO) to undertake their sponsorship of a programme.

Programme brief

See brief

Programme management More: – Knowledge	The day to day management of a programme by a programme management team. The central elements of programme management are: • having a clear reason why the work is necessary; • capturing requirements, specifying objectives, estimating resources and timescales; • preparing a business case to explain that the work is desirable, achievable and viable; • securing funding for the work; • developing and implementing management plans; • leading and motivating the management team and delivery teams; • monitoring and controlling scope, schedule, finance, risk and resources; • maintaining good relations with stakeholders; • closing the project or programme in a controlled manner when appropriate.
Programme management office	See PMO.
Programme manager	The individual with overall responsibility for the day-to-day management of a programme.
Programme mandate	See mandate.
Programme office	In MSP this function provides an information hub and is the custodian of standards. The office may serve multiple programmes.
Programme organization (MSP theme)	The MSP theme that describes the organisation management of a programme on a role by role basis.
Programme sponsor	See sponsor.
Programme support	See support.
Programme support office (PSO)	An organisation giving programme support to the programme management team.

Progress (PRINCE2 theme)	The progress theme establishes and implements mechanisms to monitor progress and ensure appropriate corrective action is taken. The equivalent in Praxis is the control topic. The closest equivalent in the PMBoK® guide is the combination of processes in the monitoring and controlling process group. In ISO21500 it is a similar combination of the processes in the controlling process group.
Progress date	The base date used for estimating progress of a project or programme. All estimates to complete or remaining durations should be assessed in relation to the status of activities on this date. Computer scheduling packages will then schedule any work not yet complete after this date. The PMBoK® guide refers to this as the data date and the GAO SAG refers to it as the status date.
Progress payment	An interim payment made to a supplier on the basis of agreed work performed or products delivered. Payment could be triggered by the passage of time (i.e. monthly valuation of work completed) or by completion of a milestone or deliverable. Progress payments are often subject to retention. The PMBoK® guide calls this retainage.
Progress report	Progress needs to be communicated at regular intervals. This may be, for example, from an individual to their team manager; from a supplier to a project manager; from a project manager to a programme manager. A progress report may cover a small work package, change management activity in a business area or an entire programme in a portfolio. Progress reports are typically produced at regular intervals as opposed to an event report that is produced when a milestone, or other specific event, is achieved.
Progress reporting	The process of gathering information on work done and revised estimates, updating the delivery plans and distributing the revised plan with a commentary on progress and forecasts.
Progressive elaboration	The PMBoK® guide term for the process of increasing the amount of detail in the project management plan as more information and hence better estimates become available.

Project

There are many definitions of a project in the available literature. Every published standard and method makes a new attempt at defining a project in a succinct way. For instance:

"A unique set of co-ordinated activities, with definite starting and finishing points, undertaken by an individual or organisation to meet specific objectives within defined schedule, cost and performance parameters." - BS6079.

"A temporary endeavour undertaken to create a unique product, service or result" - PMBoK® guide.

"A temporary organisation that is created for the purpose of delivering one or more business products according to the specified business case" - PRINCE2.

Project and programme process model

More:

- Method

Praxis has a process model that can be used for both projects and programmes.

While this may seem odd when compared to other guides, a comparison of life cycles and processes in project and programme guides from sources such as Axelos or the Project Management Institute reveals that their project and programme life cycles are fundamentally the same. Therefore they can be managed with the same, adaptable, processes.

Project approach

A PRINCE2 document that describes the chosen delivery approach for a project. Options considered could be: bespoke solution vs. ready-made solution; in-house development vs. contracted out development; modify current assets vs. replace with new and so on.

The document should explain the reasons for rejecting options as well as justifying the chosen option.

Project assurance

PRINCE2 distinguishes between project assurance and quality assurance. Project assurance refers to the responsibility of the members of the project board to assure themselves that the area of the project, on which they focus, is being managed correctly.

Praxis covers this in the assurance function.

Project authorization notification

In PRINCE2 this is a formal notification to appropriate stakeholders that the project has started. It also requests that any necessary logistical support be provided.

This is an output of the authorize the project activity in the Directing a Project (DP) process.

Project board

An element of the PRINCE2 project organisation comprising three senior management roles that combine to provide sponsorship for the project. The roles are:

- Executive (representing those who are paying for the project).
- Senior user (representing those who will use the end product).
- Senior supplier (representing those who will perform the work).

The project manager reports to the project board on matters outside his or her span of control. The principal of the relationship between the manager and the board is one of management by exception. The board is there to support the project manager, not manage the project. Most of the responsibilities of the board are laid out in the Directing a Project (DP) process in PRINCE2.

The board will approve each stage of the project based on a viable business case.

Praxis simply refers to the sponsor role which may be performed by an individual or a group such as the project board.

Project brief

See brief.

The APM PSMC uses the term in a different way to PRINCE2 and Praxis. In this guide the project brief is produced by a client to define their requirements.

Project budget

The overall budget for the project showing income as well as expenditure.

Project buffer

A reserve of time applied to the critical chain.

Project calendar

A calendar which defines global project working and non-working periods such as public holidays.

Project charter

This is a key document in the PMBoK® guide and ISO21500. It is the document that is developed by the sponsor and gives the project manager authority to apply resources to project activities. It is an output of the Develop Project Charter process in the PMBoK® guide and Develop project charter in ISO21500.

The broad equivalent in Praxis and PRINCE2 is the brief. The key difference between the project charter and the brief is the responsibility for its development, i.e. the charter is developed by the sponsor while the brief is developed by the project manager.

Project closure notification

A PRINCE2 notification from the project board to all stakeholders informing them of the closure of the project. This notification triggers the disbandment of the project management team and the demobilisation of resources. A date should be given beyond which no costs can be charged to the project.

Project closure recommendation

A recommendation prepared by the Project Manager of a PRINCE2 project that the project board uses as the basis of a project closure notification.

This is the output of the recommend project closure activity.

Project communications management

A PMBoK® guide knowledge area that provides a set of processes for managing procurement. The processes comprise:

- Plan Communications Management.
- Manage Communications.
- Control Communications.

In Praxis, the principles of communication are covered in the communication function; the practicalities of communication are covered in information management and the key function of communicating with stakeholders is covered in stakeholder management.

PRINCE2 doesn't have a specific communications theme but covers the subject in areas such as organisation and the activities in the PRINCE2 processes.

ISO21500 and the PMBoK® guide share a very similar structure and the nearest equivalent subject group in ISO21500 is simply communication.

Project cost management

A PMBoK® guide knowledge area that provides a set of processes for managing time. The processes comprise:

- Plan Cost Management.
- Estimate Costs.
- Determine Budget.
- Control Costs.

The equivalent in Praxis are the financial management function and their component procedures.

PRINCE2 doesn't have a dedicated section on costs but addresses cost and budgeting issues in many different areas.

ISO21500 and the PMBoK® guide share a very similar structure and the nearest equivalent subject group in ISO21500 is simply cost.

Project director	Often used to describe the manager of a very large project that demands a senior level of responsibility. May also refer to a person at board level within an organisation who has overall responsibility for projects and their management.
Project execution plan	See project management plan.
Project human resource management	A PMBoK® guide knowledge area that provides a set of processes for managing internal project resources. The processes comprise: • Plan Human Resource Management. • Acquire Project Team. • Develop Project Team. • Manage Project Team. Praxis covers these areas in the resource management and organisation management topics and the process activities that implement them such as *appoint definition team* and *mobilise* in the definition process. The nearest equivalent in PRINCE2 is the organisation theme. The equivalent subject group in ISO21500 is called simply - resource.
Project initiation	The PMBoK® guide defines this as the launch of a process that can result in the authorisation of a new project but doesn't provide any further detail. It could be equated to whatever process produces a mandate in Praxis and PRINCE2.
Project initiation documentation	In PRINCE2 this documentation is approved by the project board at the end of the Initiating a Project (IP) process. It provides a single source of reference about the objectives of the project and how they will be achieved. All the management strategies are included along with the business case, organisation structure, project plan and various other documents. The equivalent in Praxis is the definition documentation produced by the definition process. The corresponding documentation in the PMBoK® guide and ISO21500 is broadly a combination of the project charter, project management plan and the outputs of other planning processes such as the project schedule.

Project initiation notification

A communication from the project board of a PRINCE2 project to inform stakeholders that the project is being initiated. This notification will request all necessary support for the initiation stage from the stakeholders.

Project integration management

A PMBoK® guide knowledge area that provides a set of high level processes that co-ordinate the processes of individual knowledge areas. At the project level these processes align closely with the project life cycle. The processes comprise:

- Develop Project Charter.
- Develop Project Management Plan.
- Direct and Manage Project Work.
- Monitor and Control Project Work.
- Perform Integrated Change Control.
- Close Project or Phase.

The Praxis processes serve an equivalent purpose when applied to the project life cycle. The same is true of the PRINCE2 processes.

ISO21500 and the PMBoK® guide share a very similar structure and the equivalent subject group in ISO21500 is integration.

Project management

More:

- Knowledge

The day to day management of a project by a project manager or project management team.

The central elements of project management are:

- having a clear reason why the work is necessary;
- capturing requirements, specifying objectives, estimating resources and timescales;
- preparing a business case to explain that the work is desirable, achievable and viable;
- securing funding for the work;
- developing and implementing management plans;
- leading and motivating the management and delivery teams;
- monitoring and controlling scope, schedule, finance, risk and resources;
- maintaining good relations with stakeholders;
- closing the project or programme in a controlled manner when appropriate.

Project management knowledge area	In the PMBoK® guide this is an identifiable area of the discipline of project management that is defined by its knowledge requirements. The equivalent in Praxis are the functions described in the knowledge section of the framework. PRINCE2 refers to these as themes and ISO21500 as subject groups.
Project management office	See PMO.
Project management plan	This document summarises or brings together all the management plans for the project or programme. It may be a single, self-contained document with a section for each relevant function or a collection of separate management plans. Praxis, ISO21500 and the PMBoK® guide all use this term. In PRINCE2 the term project initiation documentation covers all the management plans but also some delivery documentation as well.
Project management process groups	Both ISO21500 and the PMBoK® guide collect their component processes into five broadly compatible groups. In ISO21500 these are referred to as: • Initiating. • Planning. • Implementing. • Controlling. • Closing. In the PMBoK® guide they are referred to as the: • Initiating process group. • Planning process group. • Executing process group. • Monitoring and controlling process group. • Closing process group.
Project management staff	The PMBoK® guide term for the project management team and any other staff involved in the project management activities. It could, for example, include members of a support office. In PRINCE2 and ISO21500 this would be the project management team and in Praxis, the management team.

Project management team	In the PMBoK® guide this term includes the members of the project team who are directly involved in project management activities. The management team in Praxis, PRINCE2 and ISO21500 are the same and hence broader than the PMBoK® guide project management team.
Project manager	In simple terms this is the person responsible for day to day management of the project. In practice this can cover many different role descriptions. The Project Manager of a major project may have a broader range of responsibilities but have a project support office performing detailed administrative and planning duties. Conversely, the manager of a small project may have a narrower remit but be responsible for the project support functions as well as management.
Project mandate	See mandate.
Project network diagram	See network diagram.
Project office	Usually used synonymously with project support office.
Project organisation	A generic term to describe the structure, roles and responsibilities of the project's management team and its interfaces to the outside word.
Project plan	Both PRINCE2 and ISO21500 use this term to represent the document that contains baselines for scope, time, cost and resources. Neither Praxis nor the PMBoK® guide describe an all-encompassing project plan but Praxis refers generically to the delivery documentation which will contain schedules and budgets for the project.

Project procurement management

A PMBoK® guide knowledge area that provides a set of processes for managing procurement. The processes comprise:

- Plan Procurement Management.
- Conduct Procurements.
- Control Procurements.
- Close Procurements.

The equivalent in Praxis are the procurement and contract management functions.

PRINCE2 doesn't go into any detail on the procurement of external products and services.

ISO21500 and the PMBoK® guide share a very similar structure and the equivalent subject group in ISO21500 is simply procurement.

Project product description

A PRINCE2 document that explains what the project must achieve in order to gain customer acceptance.

Praxis uses the more generic term specification which is more easily adaptable to different contexts and environments.

In the PMBoK® guide and ISO21500 the equivalent document is the project scope statement.

Project programme

In modern terminology, this seems like a contradiction in terms. The words project and programme now have distinct meanings.

Historically, the programme was equivalent to a schedule and was most often manifested by a Gantt chart. There are parts of the profession that still use this term.

Project quality management

A PMBoK® guide knowledge area that provides a set of processes for managing quality. The processes comprise:

- Plan Quality Management.
- Perform Quality Assurance.
- Control Quality.

The equivalent in Praxis are the planning steps in every functional procedure, the assurance function and the control function.

PRINCE2 covers this in the quality theme.

ISO21500 and the PMBoK® guide share a very similar structure and the equivalent subject group in ISO21500 is simply quality.

Project register

An alternative name for the projects dossier in MSP

Project risk management

A PMBoK® guide knowledge area that provides a set of processes for managing risk. The processes comprise:

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

The equivalent in Praxis is the risk management function and its component procedure.

PRINCE2 covers this in the risk theme.

ISO21500 and the PMBoK® guide share a very similar structure and the equivalent subject group in ISO21500 is simply risk.

Project scope

The PMBoK® guide makes a clear distinction between product scope and project scope. The former is the features and functions of the project's final output whilst the latter is the work that must be done to deliver the final output.

Project scope management

A PMBoK® guide knowledge area that provides a set of processes for managing scope. The processes comprise:

- Plan Scope Management.
- Collect Requirements.
- Define Scope.
- Create WBS.
- Validate Scope.
- Control Scope.

The equivalents in Praxis are the scope management functions and their component procedures.

PRINCE2 doesn't have a section devoted to scope and the subject is covered in a variety of areas including the plans theme and product-based planning in particular. The control of scope change is covered by the change theme.

ISO21500 and the PMBoK® guide share a very similar structure and the equivalent subject group in ISO21500 is simply scope.

Project scope management plan	A PMBoK® guide document that describes how the detailed scope of the project should be defined, how the work breakdown structure will be maintained and approved, and how scope change requests will be processed. The equivalent in Praxis is the scope management plan. The nearest equivalent in PRINCE2 is the quality management strategy and elements of the project controls contained in the project initiation documentation.
Project Scope Statement	A PMBoK® guide and ISO21500 document that describes the detailed scope of a project. This includes product descriptions, constraints, assumptions and acceptance criteria as well as the initial project organisation and risks. Praxis uses the more generic term specification which excludes the organisation and risks but can be adapted to different contexts. The equivalent in PRINCE2 is the project product description although this also excludes organisation and risks.
Project sponsor	See sponsor.
Project stakeholder management	A PMBoK® guide knowledge area that provides a set of processes for managing stakeholders. The processes comprise: • Identify Stakeholders. • Plan Stakeholder Management. • Manage Stakeholder Engagement. • Control Stakeholder Engagement. The equivalent in Praxis is the stakeholder management function and its component procedure. In PRINCE2, stakeholders are covered in the organization theme. ISO21500 and the PMBoK® guide share a very similar structure and the equivalent subject group in the ISO21500 is simply Stakeholder.
Project support	See support.
Project support office	An organisation set up to provide support to a project.

Project team

The PMBoK® guide term for everyone involved in delivering a project including management and delivery staff.

Praxis refers to these as the management team and the delivery team.

In ISO21500 the term represents only those who perform the project activities, i.e. the delivery team.

Project time management

A PMBoK® guide knowledge area that provides a set of processes for managing time. The processes comprise:

- Plan Schedule Management.
- Define Activities.
- Sequence Activities.
- Estimate Activity Resources.
- Estimate Activity Durations.
- Develop Schedule.
- Control Schedule.

The equivalents in Praxis are the schedule management functions and their component procedures.

PRINCE2 covers this in the plans them.

ISO21500 and the PMBoK® guide share a very similar structure and the nearest equivalent subject group in ISO21500 is simply time.

Projectized organization

A PMBoK® guide term for a strong matrix.

Projects, programmes and portfolios

More:

- Knowledge
- Resources

Project, programme and portfolio are terms used to describe typical combinations of complexity and environment that require distinguishable approaches to governance.

The terms have been used in various ways since the origins of modern project management in the 1950s. Many argue that there is no need to distinguish between the three and that the term 'project' is sufficient to cover the entire range of initiatives that an organisation may undertake.

The APM BoK contains a function of the same name. Most other guides address only one of the three, i.e. they are project or programme or portfolio guides.

Projects dossier

The MSP term for the list of projects contained in a programme.

Prolongation

The amount of time a project is extended beyond its planned duration.

Prolongation cost	The additional costs incurred on a project due to prolongation.
Prompt list	A prompt list raises questions about risk on a project or programme that should be considered. Rather than containing specific suggestions such as those contained in a check list model, it asks open questions such as: "Are there potential legal risks on this project?"
Prototype	A prototype is produced to prove or disprove the achievability or viability of a requirement. It may subsequently be developed into a real product or discarded.
Provider	The APM BoK term for a person or company that supplies goods or services to a project. Referred to in Praxis, PRINCE2 and ISO21500 as the supplier and in the PMBoK® guide as a seller.
Provider selection and management	An APM BoK function dealing with the acquisition of external resources. The equivalent in Praxis is the procurement function, in the PMBoK® guide it is the project procurement management knowledge area and in ISO21500 the procurement subject group.
Proximity	A term used to indicate the likely timescale of a risk event, i.e. if it occurs, will it be next week or next month.
Pull system	An approach where work is pulled into a system as capacity becomes available. Kanban is a pull system.
Push system	An approach where work is added to a system without considering the available capacity – see also pull system.

Q-sort method

An approach to the agreement of priorities for projects in a portfolio developed by W.E. Souder. The decision makers are grouped together and each is given the project names on separate cards. They are then asked to go through the following steps:

- split the cards into high and low priority;
- take some of the cards from the two packs and create a medium priority pack;
- split the high priority pack into two to give a very high pack;
- repeat the last step with the low priority pack to create one of very low;
- review the selections and make any final changes.

These steps help get over the natural tendency to give everything a high priority by forcing successive levels of breakdown.

The Q-sort method can be combined with the Delphi technique to reach consensus on priorities at each stage before going on to the next.

Qualitative risk analysis

A range of tools for examining specific risks based on considered judgement rather than statistical analysis. It includes techniques such as:

- Probability-impact tables.
- Probability-impact scores.
- Check list model.

Quality (ISO21500 subject group)

An ISO 21500 subject group that provides a set of processes for managing quality. The processes comprise:

- Plan quality.
- Perform quality assurance.
- Perform quality control.

The equivalent in Praxis are the planning steps in every functional procedure and the assurance and control functions.

PRINCE2 covers this in the quality theme.

The PMBoK® guide and ISO21500 share a very similar structure and the nearest equivalent knowledge area in the PMBoK® guide is project quality management.

Quality (PRINCE2 theme)

This theme is concerned with the means by which products are created and verified to meet the project objectives. It covers quality planning and quality control. Assurance is split into project assurance (internal checking of quality procedures) and quality assurance (external checking of quality procedures).

In Praxis, quality is deemed to be inherent in all other functions and processes. Quality planning is therefore achieved through all references to planning, quality control is achieved through all references to control and quality assurance is achieved through all references to assurance.

The equivalent in the APM BoK is the quality management function.

The equivalent in ISO21500 is the quality subject group and in the PMBoK® guide it is the project quality management knowledge area.

Quality and assurance management (MSP theme)

This MSP theme deals principally with quality assurance of the programme and its procedures and processes. It is less concerned with quality planning and quality control.

The scope of quality in a programme is defined as:

- Communications management
- Supply chain management
- Standards management
- Process management
- Information management
- Asset management
- Programme leadership
- People management

Quality assurance

The boundaries of this area are least well defined in quality literature. It is really all about confidence, i.e. making sure that the quality planning and quality control systems are working.

Quality reviews and audits are a key part of this process by periodically checking and validating the quality planning and quality control processes.

In Praxis this is primarily covered by the assurance topic.

The PMBoK® guide addresses this in the process Perform Quality Assurance and ISO21500 in the process Perform quality assurance.

In PRINCE2 assurance is split into project assurance (internal checking of quality procedures) and quality assurance (external checking of quality procedures).

Quality control	This comprises the processes and activities undertaken to check whether actual work and products meet the specified standards. It includes techniques of statistical sampling and physical testing. In Praxis this is covered by the control function and activities within the delivery and development processes. PRINCE2 covers quality control in its quality theme. ISO21500 covers this in Perform quality control and the PMBoK® guide in Control Quality.
Quality criteria	The characteristics of a product or deliverable which determine whether it meets the customer's requirements. See also acceptance criteria.
Quality function deployment	A technique for transforming qualitative user requirements into prioritised, quantitative parameters.
Quality log	A document that lists the various quality control checks that are expected on a project. For each check, the log will record the name of the product being checked, the quality control techniques to be applied, the staff responsible and the results of the check.
Quality management	Quality management is an umbrella term for a range of approaches to managing quality: • Quality Planning. • Quality Control. • Quality Assurance. Quality management is a function in the APM BoK. In Praxis, quality is deemed to be inherent in all other functions and processes. Quality planning is therefore achieved through all references to planning, quality control is achieved through all references to control and quality assurance is achieved through all references to assurance. PRINCE2 distinguishes between quality assurance and project assurance which are covered by the quality theme. The PMBoK® guide addresses quality management in the processes that make up the project quality management knowledge area and ISO21500 in the processes that make up the quality subject group.
Quality management plan	A document setting out how quality planning, quality assurance and quality control will be achieved on a project or programme.

Quality management strategy	The PRINCE2 term for a quality management plan.
Quality plan	The ISO21500 term for a quality management plan.
Quality planning	This work that plans the performance of quality assurance and quality control.
Quality register	A PRINCE2 document that summarises all planned and completed quality activities.
Quality review	A form of quality control applied to products where physical testing is not appropriate. For example, a test of the quality of concrete in a foundation may constitute a sample being crushed and its strength being measured. However, if the product is a process definition, document or a user interface of a software package, the testing will be more subjective and performed by a panel of reviewers in a quality review.
Quality tolerance	The acceptable range of values in the definition of acceptance criteria for a product.
Quantitative risk analysis	Quantitative risk analysis revolves around numerical and statistical techniques. Some of these, such as Monte Carlo, focus on statistical predictions of project timescales. Techniques such as decision trees and sensitivity analysis focus on particular risk events.
Quantitative schedule risk analysis	A formalised approach to the application of statistical risk analysis techniques.
RACI	An acronym for four types of involvement that might be used to populate a responsibility assignment matrix. The letters stand for responsible, accountable, consult and inform.
RAG reports More: – Encyclopaedia	RAG is an acronym for Red, Amber, Green and is a form of report where measurable information is classified by colour. For each colour there is some pre-determined action. This usually constitutes escalation to a higher level of management.

Rapid application development (RAD)

More:

- Encyclopaedia

Rapid application development is a software development process that seeks to deliver software applications more quickly and with lower costs than more traditional methods.

The principle of RAD is to limit the amount of time spent on up-front planning and rely on prototypes that are developed into a finished product through a close working relationship between users and developers.

Realizing the Benefits

The process in the MSP transformational flow that encompasses change management and benefits realisation.

The process has three main activities that conform to Lewin's change model but in this case they are referred to as:

- manage pre-transition
- manage transition
- manage post-transition

Receive completed work packages

This PRINCE2 activity from the Controlling a Stage (IP) process deals with the project manager's work involved in receiving a work package from the team it was delegated to in authorising a work package. This will include updates to the quality register and configuration item records.

In Praxis this is covered by the *accept completed work* activity in the delivery process and in the PMBoK® guide the nearest equivalent is Validate Scope.

There is no explicit reference to the validation or acceptance of deliverables in ISO21500.

Recommend project closure

This PRINCE2 activity in the Closing a Project (CP) process is where the project manager closes the project files and brings the work to an administrative closure. A closure recommendation is sent to the project board so that they can issue a formal closure notification.

In Praxis, this would be performed as part of the *demobilise* activity in the closure process.

The PMBoK® guide includes this administrative closure in the Close Project or Phase process. In ISO 21500 it is covered by the Close project phase or project process.

Reduce

One of the four possible threat responses. The PMBoK® guide prefers the term mitigation.

Redundant logic	Dependencies in a network diagram that are duplicated through an alternative path.
Refine the business case	In a PRINCE2 project an outline business case is produced by the Starting Up a Project (SU) process. In the Initiating a Project (IP) process this activity takes the outline version and updates and extends it to form a full business case. In Praxis this expansion of the business case is covered by the *consolidate definition documentation* in the definition process. The PMBoK® guide and ISO21500 do not have a similar two stage process for the development of the business case.
Reforming	An additional stage that some sources have added to the standard Tuckman model. This stage represents a repeat forming stage caused by team or project changes.
Register	P3 management requires lists of risks, issues, change requests and so on. The term register is often used interchangeably with log in this context, i.e. a change log and a change register may be regarded as synonymous. MSP defines a register as a "formal repository" and Praxis also uses the term register to represent a more formal document than a log. For example, a change log may simply be a log of all informal change requests whereas a change register would have defined format with an accompanying change request form and would be under version control.
Reject	One of the four possible opportunity responses.
Release	A product or set of products in a handover. These are managed, tested and deployed as a single entity. Could also be termed a deliverable.
Remaining duration	The estimate of time remaining to complete an activity. A far more useful measure of progress than percentage complete.

Report highlights	This activity from the Controlling a Stage (CS) process covers the development of highlight reports. In a PRINCE2 project, the project board will be periodically presented with a progress summary for the project and current stage. The frequency for these highlight reports is defined in the communication management strategy. The equivalent in Praxis is the *update and communicate* activity in the delivery process. There is no direct equivalent in the PMBoK® guide or ISO21500. This kind of formal communication between the project manager and sponsor would be part of Manage Communications or Manage communications respectively.
Report stage end	This PRINCE2 activity brings one stage to a conclusion and requests approval for the next stage. It produces an end stage report and a lessons report. The equivalent in Praxis is the *assemble documentation* activity in the boundaries process. Since ISO21500 and the PMBoK® guide are not structured around stages there is no direct equivalent. However, the intention in both guides is that the processes can be applied at different levels, e.g. to a project or a stage within a project. Therefore, the end of a stage in a PMBoK® guide or ISO21500 project would invoke closing processes to close the stage and initiating processes to start the next stage.
Request for change	The PRINCE2 term for a change request.
Request for information (RFI)	A request sent to a supplier to gather information about their capability and interest in bidding for a contract.
Request for proposal (RFP)	A bid document used to obtain proposals from prospective suppliers. Usually synonymous with the terms request for quotation and invitation to tender.
Request for quotation (RFQ)	A bid document used to obtain proposals from prospective suppliers. Usually synonymous with the terms request for proposal and invitation to tender.

Requirements management

More:

- Knowledge
- Competence
- Capability maturity
- Resources

Requirements management establishes stakeholders' wants and needs, and then reviews these to create a set of baseline requirements for use in solutions development and benefits management. Its goals are to:

- ensure that all relevant stakeholders have the opportunity to express their wants and needs;
- reconcile multiple stakeholder requirements to create a single viable set of objectives;
- achieve stakeholder consensus on a baseline set of requirements.

A clear and agreed expression of requirements and their acceptance criteria is essential for the success of any project, programme or portfolio.

Requirements management plan

A management plan that sets out the preferred procedures, tools and techniques to be used in requirements management. This will usually include solutions development as well.

Requirements traceability matrix

A matrix that connects requirements with the products that satisfy them. Used in product validation.

Reserve

A sum of money or time, set aside to deal with costs that may or may not be incurred. Sometimes referred to as a budget.

See also contingency reserve, change budget, management reserve.

Residual risk

The risk remaining after a risk response has been implemented.

Resource

A resource is anything that is required to perform an activity. It could be machinery, materials or manpower. Resources are inevitably limited and resource limited scheduling activities that take account of these limitations can be a lengthy and involved process.

Resource (ISO21500 subject group)

An ISO21500 subject group that provides a set of processes for managing resources. The processes comprise:

- Establish project team.
- Estimate resources.
- Define project organization.
- Develop project team.
- Control resources.
- Manage project team.

The equivalent in Praxis are the resource management and organisation management functions and their component procedures.

The nearest equivalent in PRINCE2 is the organisation theme.

The PMBoK® guide and ISO21500 share a very similar structure and the nearest equivalent knowledge area in the PMBoK® guide is project human resource management.

Resource aggregation

The process of summing resource demand across activities on a day-by-day, or week-by-week, basis. Usually presented as a histogram.

Resource allocation

More:

- Encyclopaedia

Resource allocation (sometimes called resource assignment) is deciding what skills are required to complete an activity and estimating the quantity needed.

An activity may require a single resource or multiple resources. These may be required uniformly for the duration of the activity or may have a fluctuating requirement profile.

Resource availability

See Resource limit.

Resource breakdown structure

A hierarchical representation of resources by category and type. This breakdown structure will contain all resources as opposed to the organisational breakdown structure that only covers members of the management and delivery teams, i.e. human resources.

Resource calendar

A calendar that defines the working and non-working patterns for a specific resource.

Resource code

The code given to a resource that denotes its position in a resource breakdown structure.

Resource histogram

More:

- Encyclopaedia

Resource allocation identifies what resources are needed to complete activities and critical path analysis calculates when the activities can be performed. Combining these two sets of data allows the demand for each type of resource to be aggregated over time. This information is typically represented as a resource histogram.

Resource levelling

The process of rescheduling activities such that the requirement for resources on the project does not exceed specified resource limits. The project completion date calculated from critical path analysis will probably be delayed in the process.

The GAO SAG uses this term (resource *leveling* in US English) synonymously with resource limited scheduling and does not make the distinction between resource levelling and resource smoothing.

Resource limit

The amount of a particular resource available to the project at a point in time.

Resource limited schedule

The schedule of activity start and finish dates which are calculated by resource scheduling. The opposite to an unlimited schedule.

Resource limited scheduling

More:

- Encyclopaedia

Resource limited scheduling is based on critical path analysis but schedules activities according to the availability of resources.

It comprises two approaches: resource levelling and resource smoothing.

Resource management

More:

- Knowledge
- Competence
- Capability maturity
- Resources

Resource management covers all aspects of the deployment of resources that deliver the project, programme or portfolio. Its goals are to:

- determine the best way to resource the work;
- acquire and mobilise the necessary resources;
- control resources throughout the life cycle;
- demobilise resources at the end of the life cycle;
- finalise all contractual arrangements.

For more complex projects, resource management can be broken down into its component functions:

- Procurement.
- Contract management.
- Mobilisation.

Resource management plan More: – Description – Templates	A management plan that sets out the preferred procedures, tools and techniques to be used in managing resources.
Resource optimisation	A generic term for resource levelling and resource smoothing. See also resource scheduling.
Resource profile	The pattern of fluctuating allocation of a resource on a single activity, i.e. a situation where the allocation of a resource is not constant throughout the duration of the activity.
Resource scheduling More: – Knowledge – Resources	Resource scheduling is a collection of techniques used to analyse the resources required to deliver the work and when they will be required. The goals of resource scheduling are to ensure: • efficient and effective utilisation; • confidence that the schedule is realistic; • early identification of resource capacity bottlenecks and conflicts.
Resource smoothing	The process of rescheduling activities such that the requirement for resources on the project is as smooth as possible whilst still finishing by a specified date. Sometimes referred to as time limited resource scheduling.
Responsibility assignment matrix More: – Encyclopaedia	A responsibility assignment matrix (RAM) is a chart showing the relationship between people and elements of work. It is created by combining two breakdown structures, the work breakdown structure and the organisational breakdown structure. If required, the work breakdown structure could be replaced with a product breakdown structure.
Responsibility chart	An alternative name for the responsibility assignment matrix.
Responsibility matrix	An alternative name for the responsibility assignment matrix.
Responsible	One of the four types of involvement (RACI) in a responsibility assignment matrix. Someone who is 'responsible' has the authority to perform an activity or deliver a product. Unlike accountability, responsibility can be delegated.

Responsible authority	A PRINCE2 term for the person or group that commission the project. They have the authority to commit resources and funds on behalf of the commissioning organisation.
Retainage	See retention.
Retained logic	A term from the GAO SAG relating to activities that are initially started out of sequence with their dependency links. Where this happens the activity may be halted while its predecessors are completed – thus retaining the original logic.
Retention	A sum of money, usually a percentage of the contract sum, retained by the customer from each stage payment, which is paid at the end of the project when the final output is accepted. Known in the USA as retainage.
Retrospective	A regular review that looks at how the process of doing the work can be improved. It is a more frequent and less formal approach than events such as stage reviews or post project reviews.
Re-usable resource	A resource that can be used time and time again, e.g. while an item of equipment is reusable, consumable materials are not.
Review	A critical (but constructive) assessment of a product, document, procedure or process.
Review the stage status	This PRINCE2 activity from the Controlling a Stage (CS) process performs a review of the progress of a stage. This involves reviewing many documents such as checkpoint reports, the quality register and the benefits review plan to name but three. This review will result in updates to documents such as the stage plan, risk register and lessons log. The frequency of stage reviews is defined in the stage plan. The equivalent in Praxis is the *update and communicate* activity from the delivery process; in the PMBoK® guide it is the Monitor and Control Project Work process and in ISO21500 it is the Control project work process.

Review work package status	An activity from the PRINCE2 Controlling a Stage (CS) process that monitors the progress of delegated work packages and updates the stage plan accordingly. The equivalent in Praxis is the *co-ordinate and monitor progress* activity in the delivery process. The PMBoK® guide and ISO21500 don't have the same formal approach to the delegation of work packages. In these guides the management of delegated work is covered by a smaller scale application of the process groups. Communication of progress between different levels in the project structure is therefore implicit within processes such as Monitor and Control Project Work (PMBoK® guide) and Control project work (ISO21500).
Reviewer	In a quality review, the reviewers are the people who are testing the product being reviewed.
Risk (ISO21500 subject group)	An ISO 21500 subject group that provides a set of processes for managing risk. The processes comprise: • Identify risks. • Assess risks. • Treat risks. • Control risks. The equivalent in Praxis is the risk management function and its component procedure. PRINCE2 covers this in the risk theme. The PMBoK® guide and ISO21500 share a very similar structure and the nearest equivalent knowledge area in the PMBoK® guide is project risk management.
Risk (PRINCE2 theme)	The risk theme covers the risk management procedure from identification of risks through to the implementation of mitigation activity. Praxis covers this in the risk management function and its component procedure. In ISO21500 the equivalent subject group is risk and in the PMBoK® guide the equivalent knowledge area is project risk management.

Risk actionee	The person assigned to implement the responses to a risk event or set of risk events. It distinguishes this role from the risk owner on the basis that the person who is accountable for making sure a risk is addressed is not necessarily the same person who is responsible for taking the detailed response actions.
Risk analysis	An assessment of risk events that describes their significant and potential effect on objectives. Usually divided into quantitative risk analysis and qualitative risk analysis.
Risk and issue management (MSP theme)	This MSP theme combines the management of issues with risk management. The theme is broader than it first seems since it also includes elements of change control and configuration management.
Risk and opportunities register	An alternative name for a risk register used by the APM PSMC that explicitly contains opportunities as well as threats. Strictly speaking it is a 'threats and opportunities register'.
Risk appetite	See risk context. Note: PRINCE2 combines risk appetite and risk attitude into the single definition of risk appetite.
Risk assessment	In MSP this is the combination of identification and evaluation of risks.
Risk attitude	See risk context. Note: PRINCE2 combines risk appetite and risk attitude into the single definition of risk appetite.
Risk breakdown structure	A hierarchical representation of risk events according to their categories and types.
Risk cause	The source of a risk event. Some practitioners advocate the use of a 'meta-language' to describe risks. This takes the form of "[Risk cause] results in [Risk event] which results in [Risk effect]". For example: A nail in the road (cause) results in a puncture and flat tyre (event) which results in being late for a meeting (effect).

Risk context More: – Knowledge	Risk context addresses the individual and group attitudes and behaviours that affect the way risk arises and how it may be managed. This context can be viewed as having two components: risk attitude and risk appetite. Risk attitude describes an individual or group's natural reaction to uncertainty of any type. Risk appetite represents the amount of risk that an individual or organisation is prepared to take in order to achieve their objectives. The APM BoK also has a function for risk context. The PMBoK® guide, PRINCE2 and ISO21500 do not address these factors in detail.
Risk effect	The result of a risk event occurring. Some practitioners advocate the use of a 'meta-language' to describe risks. This takes the form of "[Risk cause] results in [Risk event] which results in [Risk effect]". For example: A nail in the road (cause) results in a puncture and flat tyre (event) which results in being late for a meeting (effect).
Risk efficiency	The relationship between the amount of risk taken and the benefit expected.
Risk estimation	The estimation of probability and impact of an individual risk event.
Risk evaluation	PRINCE2 defines this as the process of understanding the net effect of threats and opportunities on an activity.
Risk evaluation	In MSP this entails understanding the net effect of identified threats and opportunities when aggregated together.
Risk event	An individual occurrence of risk. Some sources use the term risk in both its singular and plural sense. The term risk event unambiguously refers to an individual risk event rather than an overall level of risk.
Risk identification	In MSP this is the determination of what could pose a risk and the listing of sources of threats and opportunities.
Risk log	The name used by the APM PSMC for a risk register. The fact that the APM PSMC also contains a definition for a risk and opportunities register suggests that this document does not contain opportunities.

Risk management

More:

- Knowledge
- Competence
- Capability maturity
- Resources

Risk management allows individual risk events and overall risk to be understood and managed proactively, optimising success by minimising threats and maximising opportunities. Its goals are to:

- ensure that levels of overall risk within a project, programme or portfolio are compatible with organisational objectives;
- ensure that individual risks and responses are identified;
- minimise the impact of threats to objectives;
- optimise opportunities within the scope of work.

In Praxis the risk management function has two components – risk techniques and risk context.

Risk management is also a function in the APM BoK. The relevant tools and techniques are covered in the PRINCE2 risk theme and the PMBoK® guide project risk management knowledge area.

ISO21500 has the processes in the risk subject group but doesn't explain the tools and techniques.

Risk management plan

The risk management plan sets out the preferred procedures, tools and techniques to be used in risk management.

Risk management strategy

The PRINCE2 term for a risk management plan.

Risk matrix

See probability-impact table.

Risk mitigation

The PMBoK® guide term for the threat response that reduces probability or impact or both. Known in Praxis and elsewhere as reduce.

Risk owner

The person who is accountable for the resolution of a risk event. This person will be named in the risk register.

Note: this is not necessarily the person who is responsible for implementing the risk responses, see risk actionee.

Risk pot

See contingency reserve.

Risk profile

A description of the types and levels of risk relating to any constrained area of work. An organisation, portfolio, programme, project, work package etc. could all have a risk profile.

Risk register	The purpose of the risk register is to record information about identified risk events. The amount of information that needs to be recorded will depend upon the context of the work. In its simplest form (in a small self-contained project) the register will be a list of risk events and the results of qualitative analysis. A much more sophisticated risk register will be designed to enable aggregations across multiple projects and programmes. It will also record, or cross-reference to, more specialised documentation showing quantitative analysis of general uncertainty (e.g. Monte Carlo analysis or sensitivity analysis).
Risk reserve	See contingency reserve.
Risk response categories	The PRINCE2 term for the various risk responses.
Risk responses More: – Encyclopaedia	The actions that can be taken in response to identified risk. The exact nature of these responses will depend upon whether they are in response to a threat (a risk event with a negative effect) or an opportunity (a risk event with a positive effect). See also threat responses and opportunity responses. PRINCE2 refers to these as risk response categories.
Risk techniques More: – Knowledge – Resources	Risk techniques are used in the *identification*, *assessment* and *response planning* steps of the risk management procedure. Few of the techniques described are unique to P3 management but they are all tailored and applied to suit the P3 context.
Risk threshold	The level of risk that an organisation is prepared to accept, i.e. a quantitative measure of risk appetite.
Risk tolerance	The levels of risk that, if exceeded, will trigger an issue, i.e. when a risk event must be escalated from one level of management to the next.
Risk value	The result of combining the estimated impact and probability values of a risk. If subjective scales are used, examples of risk value could be high/medium or low/high. If a numeric scale is used, the value will be the product of the impact and probability estimates.

Rolling wave planning More: – Encyclopaedia	It is often impractical to plan a project in detail from beginning to end. Sensible decisions about stages in the future cannot be made until some of the current work has been completed. Rolling wave planning is the technique of planning the short to medium term work in detail and the remainder of the project in outline. Typically, as one stage nears its completion, the detailed planning will be underway for the next stage, and so on.
Rough order of magnitude	An approximate estimate of costs and time performed early in the life cycle before scope has been fully defined.
Safety management plan	The element of a project management plan that defines how safety management is to be implemented on a project.
Schedule	A collection of reports showing the timing of activities, the resources allocated to them and associated costs.
Schedule baseline	The schedule at the point where it is baselined. Once the baseline is approved it can only be changed through agreement between the manager and the sponsor.
Schedule compression More: – Encyclopaedia	There are many reasons that you may need to compress a schedule at some point in a project. It may be that you have been delayed and are missing an important deadline; it may be that new factors have arisen that change a customer's requirements or it may be that you can realise additional benefits if you complete a deliverable earlier than planned.

Schedule management

More:

- Knowledge
- Competence
- Capability maturity
- Resources

A schedule is a timetable showing the work involved in a project, programme or portfolio. It is a dynamic document that is created and maintained throughout the life cycle. Schedules can be created for different aspects of the work and these are an important means of communication with all team members and stakeholders.

The goals of schedule management are therefore to:

- determine timescales for the work;
- calculate profiles of resource demand;
- present schedule reports in a format suitable for different stakeholders.

In Praxis, schedule management is divided into two functions – time scheduling and resource scheduling.

The equivalent in PRINCE2 is the progress theme; in the PMBoK® guide it is the processes, tools and techniques in the project time management knowledge area and in ISO21500 the processes in the time subject group.

Schedule management plan

More:

- Description
- Templates

Scheduling is often taken for granted as a routine well established procedure that would not justify a management plan of its own. Where simple projects are regularly performed this may well be the case although scheduling approaches should still be documented at a programme or portfolio level and assured against this standard.

As more complex projects and programmes are undertaken, more thought should be given to the range of techniques available for both time scheduling and resource scheduling. This is particularly important where different parts of the work may need to use different techniques but still facilitate consolidation to produce high level schedules.

Schedule narrative

A document described in the GAO SAG that accompanies an updated schedule to explain what changes have been made and their effect on the schedule.

Schedule performance index (SPI)

More:

- Encyclopaedia

An earned value management ratio that indicates how well the project is performing in terms of time. An index of less than 1 indicates that the project is performing worse than planned.

An index of more than 1 indicates that it is performing better. Indices have the advantage over variances of being independent of the overall size of the project.

Schedule risk analysis

A GAO SAG term for statistical analysis of a schedule's completion date. This would encompass techniques such as Monte Carlo and PERT.

The guide includes 'key risks' as well as general uncertainty in this statistical analysis which differentiates if from the APM PSMC term 'quantitative schedule risk analysis' which only refers to general uncertainty and excludes risk events.

Schedule variance (SV)

More:

- Encyclopaedia

An earned value management term that indicates how work is progressing in relation to the baseline schedule. It is the value of the work done less the value of the work which should have been done by now.

A negative number shows that less work has been done than was expected in the baseline schedule. A positive number shows that more work has been done than had been planned at this point in the project.

Schedule visibility activity

An activity in a network diagram that performs the same function as a lead, lag or dummy. The difference is that these activities will show up on a computer generated Gantt chart whereas leads, lags and dummies do not.

Schedule visibility task

The APM PSMC term for a schedule visibility activity.

Schedule/ cost /performance triangle

An alternative term for what is more commonly known as the time/ cost/quality triangle.

See also triple constraint.

Scheduled finish date

The date an activity is scheduled to finish must take into account many different influences. The earliest finish dates from critical path analysis only take durations and dependency links into account.

Activity dates may be altered by resource scheduling and imposed dates.

The scheduled finish is the earliest realistic date for completion of the activity taking all influences into account.

Scheduled start date

The date an activity is scheduled to start must take into account many different influences. The earliest start dates from critical path analysis only take durations and dependency links into account.

Activity dates may be altered by resource scheduling and imposed dates.

The scheduled start is the earliest realistic date for starting the activity taking all influences into account.

Scheduling	Determination of the best means of achieving a project's general and specific schedule objectives. This involves identification and optimisation of resource availability, constraints and dependency links.
Scope	The sum of all products to be delivered by the project.
Scope (ISO21500 subject group)	An ISO 21500 subject group that provides a set of processes for managing scope. The processes comprise: • Define scope. • Create work breakdown structure. • Define activities. • Control scope. The equivalent in Praxis are the scope management functions and their component procedures. PRINCE2 doesn't have a section devoted to scope and the subject is covered in a variety of areas including the progress theme and product-based planning in particular. The control of scope change is covered by the change theme. The PMBoK® guide and ISO21500 share a very similar structure and the equivalent knowledge area in the PMBoK® guide is project scope management.
Scope baseline	The defined scope of the project at the point where it is baselined. Once the baseline is approved it can only be changed through formal change control.
Scope creep	The term often used to describe the continual extension of the scope of a project due to poor or inadequate change control.

Scope management

More:

- Knowledge
- Competence
- Capability maturity
- Resources

Scope management identifies, defines and controls objectives, in the form of outputs, outcomes and benefits. Its goals are to:

- identify stakeholder wants and needs;
- specify outputs, outcomes and benefits that meet agreed requirements;
- maintain scope throughout the life cycle.

Scope is the totality of outputs, outcomes and benefits that should be delivered. The complexity of the scope is the main distinguishing factor between work that is managed as a project, a programme or a portfolio.

For more complex projects and programmes, scope management is divided into:

- Requirements management.
- Solutions development.
- Benefits management.
- Configuration management.
- Change control.

The APM BoK includes a very similar function. In the PMBoK® guide this area is covered by project scope management and in ISO21500 by the scope subject area.

Scope management plan

More:

- Description
- Templates

Scope is the defining characteristic when choosing to manage work as a project or a programme. The more complex the scope, the more extensive the range of management plans needed to describe how it will be managed.

An all-encompassing scope management plan will work for less complex scope. As the complexity increases some parts of scope may need their own management plan, such as a benefits management plan for example. Ultimately, the scope management plan may be replaced by management plans for each aspect of managing scope.

Scope tolerance

The permissible deviation in scope that is allowed before the deviation needs to be escalated to the next level of management.

Scoring methods

More:

- Encyclopaedia

Scoring methods are used in investment appraisal. They have two primary purposes. Firstly they are useful where benefits are difficult to quantify objectively; secondly, they can be used to aggregate the results of multiple appraisal methods to provide an overall comparison.

Scrum
More:
- Encyclopaedia

The scrum process is a commonly used development process for agile projects. It was created by Jeff Sutherland in 1993 using an analogy from the sport of Rugby to represent a highly integrated, cross functional team.

Scrumban

An approach to agile development that combines scrum and kanban.

S-curve
More:
- Encyclopaedia

The nature of the development of projects and programmes is that the levels of activity increase to a peak during the delivery phase and then tail off towards closure. This means that the consumption of money and resource similarly builds up to a peak and then declines.

When this is calculated cumulatively and represented graphically it usually has the shape of a horizontally stretched 'S' hence the term 'S-curve'.

Secondary risk

A risk event that comes about as a result of planning a response to another risk.

Secondment matrix

See strong matrix.

Select suppliers (4.3.36)

An ISO21500 implementing process that is concerned with obtaining bids from suppliers, selecting suppliers and awarding contracts.

In Praxis these are all covered by steps in the procurement and contract management procedures.

The PMBoK® guide equivalent is Conduct Procurements.

PRINCE2 does not cover this kind of external procurement in any detail.

Select the project approach and assemble the project brief

An activity from the PRINCE2 Starting Up a Project (SU) process that performs two functions. Firstly, it determines how the work to develop the project's objectives will be approached. For example, whether there will be a bought in solution or something developed in house.

This part of the activity is dealt with by the solutions development procedure in Praxis. There is no direct equivalent in the PMBoK® guide but it could be considered implicit in the Define Scope process. Similarly with Define scope in ISO21500.

The second part of this PRINCE2 activity prepares the project brief. The equivalent in Praxis is the *prepare brief* activity in the identification process.

The nearest equivalent in the PMBoK® guide is Develop Project Charter and in IS21500 also Develop project charter.

Seller

The PMBoK® guide term for a person or company that supplies goods or services to a project.

Referred to in Praxis, PRINCE2 and ISO21500 as the supplier and in the APM BoK as a provider.

Senior responsible owner

The MSP term for a programme sponsor.

Senior supplier

This is a role on the project board of a PRINCE2 project. It is the role that has the required knowledge and experience of the main discipline(s) involved in developing the project's specialist products. The senior supplier represents the interests of suppliers who provide resources to the project.

Senior user

This is a role on the project board of a PRINCE2 project. It is the role that represents the interests of the users of the project's deliverables. This includes ensuring that specifications accurately reflect user needs and that the specialist products meet those needs.

Sensitivity analysis

More:

- Encyclopaedia

One of the problems with PERT and Monte Carlo is that their view of uncertainty in a project is fairly simplistic. For example: if a UK company were evaluating a project to build a factory in Eastern Europe there may be several areas of uncertainty, including currency fluctuations, raw material inflation and interest rates.

The simplest form of sensitivity analysis looks at each factor in turn and analyses the model based on upper and lower estimates. If the analysis is based on cost we would end up with variances in overall project cost in relation to each variable.

The results of sensitivity analysis are often represented as a tornado chart.

Sequence activities (4.3.21)

This ISO21500 process deals with the preparation of a network diagram. It involves deciding how activities are dependent upon one another and identifying any leads or lags between activities.

The equivalent in Praxis is the *build model* step in the time scheduling procedure.

The PMBoK® guide also has a Sequence Activities process and PRINCE2 addresses the subject in the *identify activities and dependencies* step of the plans procedure.

Sequence Activities (6.3)

This PMBoK® guide process deals with the preparation of a network diagram. It involves deciding how activities are dependent upon one another and identifying any leads or lags between activities.

The equivalent in Praxis is the *build model* step in the time scheduling procedure.

ISO21500 also has a Sequence activities process and PRINCE2 addresses the subject in the *identify activities and dependencies* step of the procedure in the plans theme.

Set up the project controls

This is the activity in a PRINCE2 project where the principles and mechanisms of project control are established. It is included in the Initiating a Project (IP) process.

It includes establishing decision making authorities, ensuring that role descriptions include the necessary control responsibilities and monitoring resources are available.

The outputs of this activity are included in the project Initiation documentation and constitute what Praxis would call the control management plan that would be prepared in the *prepare governance documents* activity in the definition process.

ISO21500 and the PMBoK® guide do not explicitly mention a control management plan but the equivalent can be taken as implicit in the project management plan.

Setting

More:

- Knowledge

In Praxis, this topic covers the inherent nature of a project, programme or portfolio that is derived from its objectives and how they will be achieved.

It has three component topics:

- Environment.
- Projects, programmes and portfolios.
- Complexity.

Severity

Sometimes used as an alternative term for impact in qualitative risk analysis and sometimes used to represent the product of numerical values for impact and probability of a risk event.

Share

One of the four possible opportunity responses.

Shared float

Float that is shared between all the activities on a particular path in critical path analysis.

If consecutive activities have 4 days' float this does not mean that both activities could be delayed by 4 days. The float on these two activities is shared between them. If the float is used on the first it ceases to become available to the second and vice versa.

Also known as path float.

Shell

More:

- Encyclopaedia

Richard Shell[20] identified five styles of negotiation which are closely based on the Thomas-Kilmann conflict model. This in turn was based on the Blake and Mouton managerial grid. Not only does this highlight the importance of negotiation in conflict management but it also shows that anyone's innate characteristics show themselves in different ways in different contexts.

Shewhart cycle

More:

- Encyclopaedia

The Shewhart cycle is also known as the 'plan-do-check-act' cycle and was popularised by Edwards Deming who attributed it to W.A. Shewhart.

The cycle is a form of cybernetic control in a production environment but particularly lends itself to P3 management.

The cycle has four steps: Plan, Do, Check, Act. These steps are reflected in most project management methodologies.

Should-cost estimate

An internal estimate of the likely cost of a product or service to be used as a check against supplier quotations.

Site overheads

Overhead costs of a construction project. Generally referred to as 'prelims' in the UK.

Situational leadership model

See Hersey and Blanchard.

Skill group

Some computer packages allow the definition of group resources or skill groups. The resource scheduling algorithm then chooses the most appropriate resource from the group, for an activity, based on its availability and efficiency.

Slack

Originally the flexibility in the dates of an event in an activity on arrow network i.e. late event time - early event time. Now frequently used synonymously with float.

[20] Shell, G.R., (2006), Bargaining for advantage, Penguin Books, New York.

Slip chart

A schedule showing the slippage of activities or milestones. The chart normally shows the baseline next to the latest forecast so that the slippage can be easily seen.

Slippage

The time difference between the latest scheduled dates for an activity and the baseline dates.

Slippage report

A report highlighting the time difference between current scheduled dates and the original baseline dates.

SMART

An acronym for the characteristics of well-defined delegated objectives. The letters stand for:

- Specific.
- Measurable.
- Achievable.
- Realistic.
- Time-constrained.

Solutions development

More:

- Knowledge
- Competence
- Capability maturity
- Resources

Solutions development determines the best way of satisfying the requirements for an output. Its goals are to:

- evaluate baseline requirements and alternative solutions to achieve them;
- select the optimum solution;
- create a specification for the solution.

Requirements management produces a clear set of stakeholder requirements but does not explain how to meet those requirements. Solutions development investigates the technical options for meeting the requirements and will work in conjunction with investment appraisal that investigates the financial implications of the different options.

The APM BoK also contains a function for solutions development. In PRINCE2 this is implicit in the selection of the project approach.

The PMBoK® guide combines solutions development with requirements management in the Collect Requirements process.

ISO21500 makes no specific reference to solutions development, so this should be seen as implicit in the Define scope process.

Span activity

See hammock.

Specialist product	PRINCE2 defines two types of product: specialist products and management products. Specialist products are those that are the deliverable components of the project's end goal.
Specific analogy estimating	A form of comparative estimating where the project being estimated is compared to one other specific, but similar, project.
Specification	Specifications define outputs and are created by the solutions development procedure in Praxis. The structure and content of a specification is entirely dependent on the context. In construction a specification may comprise layouts, elevations, bills of quantities, structural details and so on. In IT, a specification could be functional or technical.
Spike	In agile development this is a piece of work that gathers information, does research or produces a prototype in order for a user story to be completed.
Spiral life cycle	A life cycle model, drawn in the form of a spiral, which incorporates elements of both iterative and waterfall development life cycles.
Split activity	A term used in computer based resource limited scheduling where an activity has been split in order to resolve a resource conflict.
Splittable activity	An activity that can be split into one or more sections for the purpose of resource limited scheduling.
Sponsor	If one person fulfils the role of sponsorship, they are usually referred to as the sponsor.
Sponsoring group	A group formed to fulfil the function of sponsorship.

Sponsorship

More:

- Knowledge
- Competence
- Capability maturity
- Resources

Sponsorship provides ownership of, and accountability for, the business case and ensures that the work is governed effectively. The goals of sponsorship are to:

- provide ownership of the business case;
- act as champion for the objectives of the project, programme or portfolio;
- make go/no go decisions at relevant points in the life cycle;
- address matters outside the scope of the manager's authority;
- oversee assurance;
- give ad-hoc support to the management team.

There are various names given to the role that provides sponsorship, such as: executive, senior responsible owner or client. In Praxis the role is referred to as the sponsor.

The APM BoK also has a function for sponsorship. In PRINCE2 the function is performed by the project board through the Directing a Project (DP) process.

In the PMBoK® guide sponsorship is briefly explained in the section on project stakeholders and governance. ISO21500 makes many references to the sponsor throughout the guide. These collectively describe the function of sponsorship.

Sponsorship process

More:

- Method

This process does not have an equivalent phase in the project or programme life cycle. It describes the activities that a sponsor must perform to exercise overall control and make key decisions during the life cycle. It also includes aspects of the relationship between the sponsor and the manager.

This process is designed to achieve the goals of the sponsorship function, i.e. to:

- provide ownership of the business case;
- act as champion for the objectives of the project or programme;
- make go/no go decisions at relevant points in the life cycle;
- address matters outside the scope of the manager's authority;
- oversee assurance;
- give ad-hoc support to the management team.

The corresponding process in PRINCE2 is the Directing a Project (DP) process. Neither the PMBoK® guide nor ISO21500 have specific sponsorship processes.

Sprint

A period ranging from two to five weeks that represents an iteration in the scrum form of agile development. See also timebox.

Sprint zero

In agile this is a sprint at the beginning of a segment of work that addresses upfront activities. For example, it may create a basic architecture for the project output so that future sprints can add incremental value in an efficient way. It may involve some spikes.

Staffing management plan

A PMBoK® guide plan that is a component of the human resource management plan. This describes when team members will be acquired, how they will be acquired and how long they will be needed.

Stage

The development phase of the project life cycle is often divided into stages. This is a management technique that introduces key go/no go points at which the continuing viability of the project can be assessed. Each stage must be authorised before it can proceed.

Stage boundary

The point in a project at which one stage comes to an end and another begins.

See also boundaries process.

Stage budget

The budget for a stage of a project.

Stage gate	See gates.
Stage plan	A delivery plan for a specific stage of a project.
Stakeholder	Anyone who has an interest in the performance or outcome of the project. Stakeholders are identified and a communications plan shows how they will be kept involved or informed.
Stakeholder (ISO21500 subject group)	An ISO21500 subject group that provides a set of processes for managing stakeholders. The processes comprise: • Identify stakeholders. • Manage stakeholders. The equivalent in Praxis is the stakeholder management function and its component procedure. In PRINCE2, stakeholders are covered in the organisation theme. The PMBoK® guide and ISO21500 share a very similar structure and the equivalent knowledge area in the PMBoK® guide is project stakeholder management.
Stakeholder analysis	The systematic collection and collation of qualitative and quantitative information about stakeholders.
Stakeholder engagement	Sometimes used synonymously with the term stakeholder management. In Praxis this is a step within the stakeholder management procedure.
Stakeholder management More: – Knowledge – Competence – Capability maturity – Resources	Stakeholder management ensures that stakeholders are appropriately involved in all aspects of the project, programme or portfolio. Its goals are to: • ensure that the views and attitudes of all stakeholders are understood; • influence stakeholders to be supportive of the work wherever possible; • maximise the impact of supportive stakeholders; • minimise the impact of unsupportive stakeholders. The APM BoK also has a function for stakeholder management. In PRINCE2 this is covered in the organisation theme. ISO21500 has a subject group called stakeholder and the PMBoK® guide has a knowledge area called project stakeholder management.

Stakeholder management plan More: – Description	A management plan that sets out the preferred procedures, tools and techniques to be used in managing stakeholders.
Stakeholder mapping More: – Encyclopaedia	Stakeholder management requires the management team to have a thorough understanding of stakeholders and their interests. This is often achieved through stakeholder mapping. Different things can be mapped but the first and most obvious is to map stakeholders against their interest in a project, programme or portfolio. This may result from, or be supplemented by, an influence diagram.
Stakeholder matrix	See stakeholder mapping.
Stakeholder profile	A document that contains information about a stakeholder. This will range from the administrative (e.g. contact details) to the assessment of their areas and levels of interest. This profile is the basis of deciding how best to engage with individual stakeholders.
Stakeholder register	A register of information about individuals and groups who have an interest in the work being performed.
Standard portfolio	See portfolio.
Stand-up meeting	See daily stand-up.
Start activity	An activity in a precedence diagram which deliberately has no predecessors, i.e. it represents a start point in the network. Networks can have multiple start activities.
Start event	The event at the start of an activity in an activity on arrow diagram. Also known as an i-node.
Start float	Float normally indicates that the completion of an activity can be delayed without affecting the critical path. When start to start links are used, the finish of an activity may be on the critical path but its start is not. The activity is then said to have start float.

Start no earlier than (SNET)	A type of imposed date specifying that an activity cannot start earlier than the specified date. If all previous activities can be completed with time to spare this could lead to a critical path that has float.
Start no later than (SNLT)	A type of imposed date specifying that an activity cannot start later than the specified date. If all previous activities cannot be completed in time this would lead to a path with negative float.
Start to finish link	A type of dependency link in a precedence diagram which indicates that the finish of the successor may not occur until the predecessor has started. Hardly ever used.
Start to start link	A type of dependency link in a precedence diagram, which indicates that the start of the successor may not occur until the predecessor has started. Also known as an SS link.
Starting Up a Project (SU)	This is the first process in the PRINCE2 method and addresses the first phase of the project life cycle. Its main output is the project brief. This is used by the project board to assess whether approval should be given for the Initiating a Project (IP) stage. The equivalent in Praxis is the identification process. Although the approach in the PMBoK® guide and IS21500 is different, they both contain an integration process that is very similar in scope to Starting Up a Project. In the PMBoK® guide this is Develop Project Charter and in ISO21500 it is also Develop project charter.
Statement of work (SoW)	The PMBoK® guide and ISO21500 term for a document that defines the products or services that will be created by the project. It also explains the business need and how the project fits with organisational strategy. There is no direct equivalent in Praxis and PRINCE2 but there are commonalities with the mandate, brief and outline business case. The APM PSMC also uses the term but in this case it is equivalent to a high level specification.
Status date	The GAO SAG term for the progress date

Statusing	The GAO SAG term for the process of updating the schedule with latest progress information and adjusting estimates for future activity durations and effort.
Steps	Steps are components of an activity that are used to measure the progress of the activity in an objective way. In a large network diagram the use of steps enables the number of activities to be reduced.
Storming	The second stage of team building in the Tuckman model.
Story points	User stories in an agile project are not of equal difficulty. Therefore, scrum teams often use an arbitrary measure called story points. These are a qualitative measure of the effort required to complete a user story. The resulting estimated story points can then be used to measure velocity.
Strategic management	A function in the APM BoK that describes the strategic management that gives rise to projects, programmes and portfolios. This is considered to be out of scope by the other guides.
Strategic schedule	The APM PSMC refers to this as a high level schedule produced early in the project life cycle to help determine the relationship with other projects. This would therefore constitute a programme or portfolio level schedule.
Strong matrix More: – Encyclopaedia	The best matrix organisation for a company that manages many projects, is the strong matrix. This takes the project managers out of the departmental structure and places them in a project management group reporting to a projects director or PMO head. In this organisation, each project manager is able to concentrate on the needs of the project without being distracted by departmental loyalties. The creation of a role that heads P3 management provides someone at a level equal to the departmental managers who can address functional conflicts between projects in an impartial way.
Structured portfolio	See portfolio.

Subject groups (ISO21500)

An ISO21500 subject group is a set of processes related to a particular area of project management, such as risk, cost or communication. The full list of subject groups is:

- Integration.
- Stakeholder.
- Scope.
- Resource.
- Time.
- Cost.
- Risk.
- Quality.
- Procurement.
- Communication.

The same set of processes are used to manage the overall project and subdivisions within it, such as a phase, stage or sub-project.

The equivalents in Praxis are the knowledge functions with each Praxis procedure performing the same function as the set of ISO21500 processes.

The PMBoK® guide and ISO21500 share a very similar structure with the PMBoK's knowledge areas being equivalent to the ISO21500 subject groups.

In PRINCE2 the closest equivalents are the PRINCE2 themes.

Subjective estimating

Estimating that is based purely on the expert judgement of the estimator.

More:

- Encyclopaedia

Sub-network

The subset of a project network diagram relating to a sub-project.

Sub-project

Where project networks become very large, it is useful to adopt a layered approach. The top level network comprises large sections of work as single activities which are then broken down into more detailed networks. Critical path analysis must then work down through the levels and back up again to perform the overall calculation.

See also hierarchy of networks.

Succeeding activity

See successor.

Success criteria	The measurable criteria that must be met by a project or programme. Most criteria relate to the time, cost and scope (including benefits) aspects, but levels of risk and customer satisfaction with the project or programme management could also be success criteria.
Success factors and maturity	An APM BoK function that deals with capability maturity. The equivalent function in Praxis is called capability maturity which views the attributes of the capability maturity model as being the success factors.
Successor	An activity which logically succeeds another in a network diagram.
Summary activity	See hammock.
Summary schedule	A high level schedule containing milestones and summary activities.
Sunk costs	Costs that could not be avoided even if the project or programme were to be terminated i.e. these are the actual costs to date plus the committed costs at the point where termination is proposed. If the sunk costs are a high proportion of the total cost of completing the project or programme it may be better to continue rather than terminate even if the full business case cannot be achieved.
Supercritical	If an imposed finish has been set, the critical path leading to that point may be too long to finish by that date. The critical path then becomes supercritical and possesses negative float. Also referred to as hypercritical.
Supplier	The term used by Praxis, PRINCE2 and ISO21500 to represent a person or company that supplies goods or services to a project. In the PMBoK® guide the supplier is referred to as a seller and in the APM BoK as a provider.

Support

More:

- Knowledge
- Capability maturity
- Resources

Support is a set of specialist and administrative services carried out on behalf of project, programme or portfolio managers. A support infrastructure can be constituted in many different ways with many different roles within the realm of P3 management. A definitive set of goals for support is impractical but they are generally drawn from the broad list shown below:

- provide administrative support to P3 managers;
- support the governance of P3 management;
- provide specialist technical support;
- conduct assurance.

In the APM BoK, the support role is covered by the infrastructure function. PRINCE2 has a short section on support in the organisation theme. Neither the PMBoK® guide nor ISO21500 address support.

Synergistic contingency evaluation and response technique (SCERT)

A method for analysing networks based on probability distributions of duration and progress. This is a complex method which has developed from PERT and GERT and is used more for retrospective analysis of projects to improve future planning.

Take corrective action

An activity from the PRINCE2 Controlling a Stage (CS) process.

This PRINCE2 activity deals with actions taken by the project manager within the agreed tolerances of a stage or project. There may be input by the project board to any decisions made but this process does not cover the situation where issues have to be formally escalated to the project board.

The equivalent activity in Praxis is the *corrective action* activity in the delivery process.

The PMBoK® guide process Direct and Manage Project Work makes specific reference to the need to take corrective action but the corresponding ISO21500 process, Direct project work, does not.

ISO21500 prefers to refer to corrective action as an output of individual control processes such as Control resources and Control risks.

Tannenbaum and Schmidt

More:

- Encyclopaedia

Robert Tannenbaum and Warren Schmidt first published their views on leadership styles in 1958[21] and updated their model in 1973[22].

The model focuses on the delegation of authority from a manager to the team. In the original 1958 model the language of 'subordinates' and 'superiors' reflects its age, but the principles hold true.

Target finish date

See imposed finish.

Target schedule

An alternative name for the baseline schedule.

Target start date

See imposed start.

Task

Usually synonymous with activity. Some sources regard a task is a sub-division of an activity, others maintain that the opposite is true.

Team manager

In PRINCE2 the team manager is the person given responsibility for a work package.

Team plan

The lowest level of PRINCE2 plan. Its scope typically covers a work package allocated to a team.

Teamwork

More:

- Knowledge
- Competence
- Resources

Teamwork is how a group of people come together to collaborate and co-operate in achieving common objectives. The goals of teamwork are to:

- create a team from a collection of individuals;
- develop and maintain the performance of the team.

Teams exist in all walks of life from working teams to sporting teams. The difference between a team and a group of individuals is the team's collective commitment to agreed objectives. All teams are made up of individuals and regardless of the context of the team, human nature means that they go through similar stages of development and suffer from the same problems.

Teamwork is also a function in the APM BoK. Neither PRINCE2 nor ISO21500 address the subject. The PMBoK® guide has a brief explanation in the tools and techniques part of the Develop Project Team process.

[21] Tannenbaum, R. & Schmidt, W., How to Choose a Leadership Pattern, Harvard Business Review March-April (1958).

[22] Tannenbaum, R. & Schmidt, W, How to Choose a Leadership Pattern, Harvard Business Review May-June (1973).

Technical stage

PRINCE2 differentiates between technical stages and management stages. Technical stages are defined by the technical content of the work (e.g. design, build etc.) rather than for the purpose of management control.

Tender

A document in which a supplier offers a price for completion of a given specification of work.

Termination

The conclusion of the product life cycle where a product is decommissioned at the end of its useful life.

Thamhain and Wilemon

More:

- Encyclopaedia

Thamhain and Wilemon[23] conducted a study to investigate the sources of conflict in the project management life cycle.

First of all, Thamhain and Wilemon identified the seven main sources of conflict on a project. These were: schedule, priorities, manpower, technical options, procedures, cost and personality. They then assessed the relative intensity of conflict from these sources at different phases in a four phase life cycle.

Theme

See PRINCE2 themes or MSP themes

Thomas-Kilmann

More:

- Encyclopaedia

Kenneth Thomas and Ralph Kilmann based their conflict style inventory on the managerial grid developed by Blake and Mouton. They arranged five conflict resolution approaches on scales of two individual characteristics: assertiveness and cooperativeness.

They also developed the Thomas-Kilmann Conflict Mode Instrument that is used to identify an individual's natural tendencies when dealing with conflict.

Threat

A risk that could have a negative impact on the objectives of a project or programme.

When most people refer to risk they are actually thinking of a threat but risks can also be opportunities.

[23] Thamhain, H.J. and Wilemon D. L., (1975). Conflict management in project life cycles. Sloan Management Review.

Threat response

There are four ways of responding to a negative risk or threat. These are:

Avoid: Find a way of performing the work that avoids the risk.

Transfer: Contractually transfer the risk to someone else, e.g. insurance or a fixed price contract.

Reduce: Find a way of performing the work that reduces the impact it will have should it occur.

Accept: Simply accept that there is no cost effective action that can reasonably be taken.

Three duration technique

A method for reducing estimating uncertainty. Three activity durations are estimated: optimistic, likely and pessimistic. Analysis methods such as PERT and Monte Carlo simulation are performed to make statistical estimates of the completion date of the project.

Three-point estimate

See three duration technique.

Tied activity

An activity that must be performed immediately, or within a pre-determined time, after its predecessor.

Time & materials contract

A payment method that is a combination of cost plus and fixed price contracts. Fixed prices can be agreed for component products but because the full scope of the project is not defined, the total cost is not known at the outset. The contractor is paid for their time at an agreed rate and the materials at cost plus a fee.

Time (ISO21500 subject group)

An ISO21500 subject group that provides a set of processes for managing time. The processes comprise:

- Sequence activities.
- Estimate activity durations.
- Develop schedule.
- Control schedule.

The equivalent in Praxis are the schedule management functions and their component procedures.

PRINCE2 covers this in the plans theme.

The PMBoK® guide and ISO21500 share a very similar structure and the nearest equivalent knowledge area in the PMBoK® guide is project time management.

Time / Cost / Quality triangle	See triple constraint.
Time analysis	See critical path analysis.
Time chainage chart More – Encyclopaedia	A form of chart that combines line of balance with a physical layout of the work being done.
Time contingency	Time added to the duration of an activity that takes estimating uncertainty into account. See also buffer.
Time limited resource scheduling	An alternative name for resource smoothing.
Time now date	See progress date.
Time phased network	See time scaled network.
Time risk allowance	A collective term for techniques that allow for estimating uncertainty such as buffers and the three duration technique.
Time scaled network	A network diagram drawn so that the length of the arrows or boxes is proportional to their duration. If precedence diagrams are drawn against a time scale they effectively become linked bar charts.
Time scheduling More: – Knowledge – Resources	Time scheduling techniques are used to develop and present schedules that show when work will be performed and products delivered. The goals of time scheduling are to: • construct a model for use in numerical analysis; • calculate dates for components of work; • determine where there is flexibility in the schedule. Time scheduling is also a function in the APM BoK. The relevant tools and techniques are covered in the PRINCE2 progress theme and the PMBoK® guide project time management knowledge area. ISO21500 has the processes in the time subject group but doesn't explain the tools and techniques.

Time sheet	A means of recording the actual effort expended against project and non-project activities by individuals working on the project.
Time tolerance	The permissible deviation in schedule that is allowed before the deviation needs to be escalated to the next level of management.
Timebox More – Encyclopaedia	Timeboxes are used in agile approaches to project management. They represent a period of typically two to five weeks, sometimes referred to as sprints or iterations. Each timebox starts with a backlog of prioritised products or features.
Time-driven control	A term used in PRINCE2 for a periodic control point, e.g. a monthly progress review.
To-be state	A term used by MSP to describe the ultimate objective of a programme. Also referred to as the end goal.
Tolerance	Effective project or programme control requires management by exception between levels of the management team. The sponsor will delegate authority to the project or programme manager and the manager will, in turn, delegate authority to managers of sub-projects or teams. When a project, sub-project or work package is delegated, performance criteria for scope, time and cost will be stated. Tolerances define how much the person managing delegated work can deviate from these performance targets before having to report an issue to the level of management above. See also triggers.
Tolerance threat	A term used by PRINCE2. If the status of a stage is such that the project manager is unable to keep the stage plan within agreed tolerances, then the situation must be escalated to the project board. This is known as a tolerance threat.
Top down estimating	Initial estimating is usually performed top down. Before the full work breakdown structure has been developed, estimates are likely to be based on parametric estimating or comparative estimating and be less accurate than estimates that can be produced once all the detailed activities have been defined and bottom up estimating can be performed.
Tornado chart More: – Encyclopaedia	A diagram that illustrates the upper and lower bounds of a range of variables resulting from a sensitivity analysis. When the variables are ordered with the most volatile at the top and the most stable at the bottom, the result is similar to a cross section through a tornado.

Total float	The amount of time an activity may be delayed without extending the critical path. The short formulae often used for calculating total float are: Latest start – earliest start, or Latest finish – earliest finish However, these formulae are only true for activities with finish to start links. The full formula that works for all types of dependency link is: Total float = latest finish – earliest start – duration
Tracking	The process of collecting actual time, cost and resource progress information and feeding this back into the project schedule.
Tranche	A group of projects within a programme that produce a distinct component of the blueprint. Tranches provide a means of breaking a programme up into manageable pieces. It is advisable to construct tranches that deliver a definable set of benefits. The implication of this is that a tranche will have its own business case. At the end of each tranche a benefits review will be performed and the sponsor will consider the business case for the next tranche.
Tranche budget	The budget for a tranche of a programme.
Tranche business case	The justification for investment in a tranche of work within a programme.
Transfer	One of the four possible threat responses.
Transformation	In order to achieve business benefits it is almost invariably the case that business-as-usual needs to be changed in some way. Some guides (such as MSP) refer to this change as 'transformation' rather than the more common term 'change management'. In the P3 management context this provides a useful distinction between change management and another common P3 management term 'change control'. However, most general management literature on the subject of transformational change is labelled as change management so Praxis sticks with the more generally accepted term.

Transformational flow	MSP assumes that all programmes are programmes of business change. It also uses the term 'transformation' in preference to 'change management'. As a result MSP refers to the programme management life cycle as the transformational flow.
Transition plan	In the context of an organisational change programme, the outputs of projects must be delivered and then used in some beneficial way. Work must be done to change the existing operational model to the new operational model. The schedule of technical change and change management activities needed are contained in a transition plan.
Treat risks (4.3.30)	This ISO21500 process evaluates the identified risk events (both threats and opportunities) and decides how best to respond to them. The project management plan will be updated accordingly. The equivalent in Praxis is the *plan risk responses* step in the risk management procedure; In PRINCE2 it is the *plan* step in the risk theme procedure; in PMBoK® guide it is Plan Risk Responses.
Trend analysis	The use of mathematical models to forecast future performance based on historical data. The use of performance indices in earned value to predict eventual cost and completion dates are an example of trend analysis.
Triangular distribution	A statistical distribution that is commonly used in PERT analysis and Monte Carlo analysis.
Trigger	A threshold that is set to determine when an issue should be escalated. One example of the type of indicators that could be used as triggers are schedule performance index (SPI) and cost performance index (CPI) from earned value analysis. E.g. if a project's CPI drops below 0.95 the control management plan may specify that this must be escalated to the project sponsor.
Triple constraint More: – Encyclopaedia	The triple constraint is one of the fundamental truths of P3 Management. Also known as the 'iron triangle', it has spawned many variations but these often dilute the impact of the original. In its simplest form the triangle shows the relationship between the objectives of the work (scope), the time it will take to produce them and how much it will cost to complete the work. The significance of the triangle is that it is the most stable geometric shape and emphasises that any attempt to make changes to one corner of the triangle will have an immediate impact on the other two.

Tuckman More: – Encyclopaedia	Bruce Tuckman first published his model of group dynamics in 1965. It originally comprised the four stages: forming, storming, norming and performing. In 1977 he added the fifth stage: adjourning, and other sources have added a sixth: mourning.
Uniform distribution	A distribution used in Monte Carlo analysis to indicate that all durations or costs between the optimistic and pessimistic duration estimates have an equal chance of occurring.
Unlimited schedule	A schedule calculated based upon unlimited availability of resources, i.e. the opposite of a resource limited schedule. Critical path analysis is a form of unlimited schedule because it does not take resource limits into account when scheduling activities.
Update the business case	An activity from the PRINCE2 Managing a Stage Boundary (SB) process. At a stage boundary in PRINCE2, the forthcoming stage plan is produced and this results in the project plan being updated. The revised plans are then used to update the project's business case so that a decision can be made whether or not to proceed with the next stage. In Praxis this is incorporated in the plan next tranche/stage activity in the boundaries process. Since neither PMBoK® guide nor ISO21500 define stages, keeping the business case up to date is an ongoing process.
Update the project plan	An activity from the PRINCE2 Managing a Stage Boundary (SB) process. At each stage boundary the project plan is updated to reflect the final version of the stage plan being concluded and the latest plan for the next stage. This activity will also be triggered by the preparation of an exception plan. In Praxis, this is covered by the *assemble documentation* activity in the boundaries process. Neither ISO21500 nor the PMBoK® guide have a formal approach to stages built into their processes. Such updates should be considered implicit in processes such as Monitor and Control Project Work (PMBoK® guide) and Control project work (ISO21500).
User acceptance	Acceptance by the person or group who will use a deliverable once it has been handed over.

User story	A user story is a type of functional specification used in agile development. It describes a software feature from the perspective of the user experience. It includes a description of the user, what they want and why.
Users	The group of people who are intended to benefit from, or operate the products of, the project. The users are key stakeholders in the project. PRINCE2 nominates a senior user who sits on the project board to provide sponsorship.
V life cycle	A life cycle model, drawn in the form of a 'V', which demonstrates the relationship between earlier and later phases of the life cycle.
Validate Scope (5.5)	The PMBoK® guide process that formalises the acceptance of deliverables. In Praxis this is covered by the *accept completed work* activity in the delivery process and in PRINCE2, by the receive completed work packages activity in Controlling a Stage (CS). There is no explicit reference to the validation or acceptance of deliverables in ISO21500.
Validation	A technique that checks that a product satisfies user requirements. Validation ensures that the correct product is being developed as opposed to verification which ensures that the solution is being developed correctly.
Validation and verification requirements matrix	A term used by the APM PSMC that encompasses elements of the V life cycle and a requirements traceability matrix.
Value	In value management, value is the ratio of 'satisfaction of requirements' over 'use of resources'.
Value engineering	A technique for generating alternative actions to improve the value of a product by balancing time and cost without affecting the product's ability to meet user requirements.
Value for money ratio	The ratio of monetary and non-monetary benefits to the investment made to achieve them.

Value management More: – Encyclopaedia	Value management is concerned with maximising the value of benefits delivered by a project or programme. Since 'value' is a subjective term it is important that a balance is maintained between different stakeholder perceptions of what value actually means. There are many different approaches to the value management procedure but they all follow the same general principles. The technique initially spans the requirements management and solutions development functions but some aspects should be continued through the delivery phase of the life cycle.
Value tree	A diagram that shows the hierarchy of factors that drive value, and the relationships between them.
Variance at completion (VAC) More: – Encyclopaedia	In earned value management this is the budget at completion less the estimate at completion. A negative result indicates that the project is over budget.
Variant	A term used in PRINCE2 product-based planning. This is a variation of a baselined product. For example, if this glossary was a product then an Italian translation would be a variant of that product rather than an entirely different product.
Variation of price contract More: – Encyclopaedia	A form of fixed price contract where the price is adjusted to take external factors such as increased prices, inflation or deflation into account. Sometimes referred to as a fixed price with economic price adjustment contract.
Variation order	The term used mainly in the construction and engineering industries for an approved technical change to a project.
Velocity	Velocity is a measure of performance in an agile project. The velocity is the number of units of work completed in a certain interval. Typically this may be the number of story points completed in each sprint.
Verification	A technique that checks that a product meets its acceptance criteria. Verification ensures that the solution is being developed correctly as opposed to validation which ensures that the correct product is being developed.

Vertical integration

A term used by the APM PSMC to refer to one aspect of the assurance of a project schedule.

This form of schedule assurance confirms that the data at different levels of detail (e.g. within a hierarchy of networks) is consistent and that each network covers the relevant scope.

See also horizontal integration.

Vertical traceability

The GAO SAG term for vertical integration.

Vision statement

More:

- Description
- Sample

A vision statement is a brief description of the end goal of a complex project or programme. The need for a succinct and memorable description is necessary where there are many stakeholders who need to gain an insight into the end result of a complex piece of work.

MSP deals with this in a dedicated theme simply called Vision.

Waterfall

A term used to represent predominantly linear development approaches where (for example) design is completed before development starts and development finishes before testing starts.

Often drawn in a way that graphically resembles a waterfall and usually used to contrast the linear approach to more iterative approaches such as agile.

WBS dictionary

See work breakdown structure dictionary.

Weak matrix

More:

- Encyclopaedia

A form of matrix organisation where projects are co-ordinated by people within the functional departments because departmental boundaries do not allow central co-ordination of the project.

Often there is no real project manager with overall responsibility for the management of the project and the co-ordination is likely to be a joint effort between representatives of different departments. This structure is sometimes known as a co-ordination matrix.

Weighted milestone method

More:

- Encyclopaedia

An earned value management method that divides a work package into segments so that each segment ends with a milestone. The milestones are then assigned a weighted proportion of the work package costs.

See also earning rules.

What-if analysis

In the days before the widespread use of computers, critical path analysis had to be done by hand. This could take some time and it was unlikely that a planner would repeat the calculation many times in order to test all the questions that start with "What if we tried a different approach?" or "What if that change were to be accepted?"

Computer based scheduling enables many alternatives to be tried with ease in order to test alternative ways of working, the impact of change requests and solutions to problems.

What-if simulation

The performance of a number of analyses (typically those based on a network diagram) according to pre-set parameters, in order to simulate the behaviour of the project under specific varying conditions.

Could be part of a sensitivity analysis.

Whole life cost

The total cost of ownership over the life of an asset. In some cases this is used in a business case rather than just the cost of creating the asset.

Window analysis

The comparison of the baseline schedule and the as-built schedule for a particular period.

Work breakdown code

See breakdown code.

Work breakdown structure (WBS)

More:

- Encyclopaedia

A tree diagram that breaks down the project in increasing levels of detail.

Each element of the structure is a product for which acceptance criteria will be defined. The WBS is the basis of the definition of what a project is intended to produce to meet its objectives.

With the use of project planning software the practical application of the WBS has increasingly been to define activities rather than products as the elements within the structure.

This prompted some sources to specify a distinct product breakdown structure or product-based work breakdown structure.

Work breakdown structure dictionary

A term used by the PMBoK® guide, ISO21500 and the APM PSMC for a document that provides detailed deliverable, activity and scheduling information about each component on the work breakdown structure (WBS).

WBS components are similar to work packages in Praxis and PRINCE2 and so the dictionary is the equivalent of a compendium of work package descriptions.

Work calendar	See calendar.
Work package	A package of deliverable work that is sufficiently well defined to allow it to be delegated to a person or team. Precise definitions vary slightly. For example, the PMBoK® guide defines a work package as being at the lowest level of each branch of a work breakdown structure. Praxis and PRINCE2 have a broader definition where a work package is a combination of product information together with all the time, cost and other information required to delegate the work. PRINCE2 goes further and has a formal definition where the work package is 'the set of information that provides all the information that an individual or team need in order to successfully deliver the component products'. It also confirms agreement between the project manager and individual or team manager that the work can be done within the defined constraints.
Workaround	A response to an issue that is not a planned response, i.e. as distinct from a pre-determined contingency plan. A workaround of sufficient size to warrant replanning would result in an exception plan.
Working time	Time measured according to the working week, i.e. in a normal five day week the working time of five days equates to seven days of elapsed time.
Workstream	An MSP term used to describe a grouping of projects and activities. A workstream may represent a grouping based (for example) on discipline, location or outputs. Workstreams may cross tranche boundaries and are created to improve the management of related areas of work.
Zero float	A term used when referring to the fact that an activity on the critical path has no float.

Published by Praxis Framework Ltd.

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