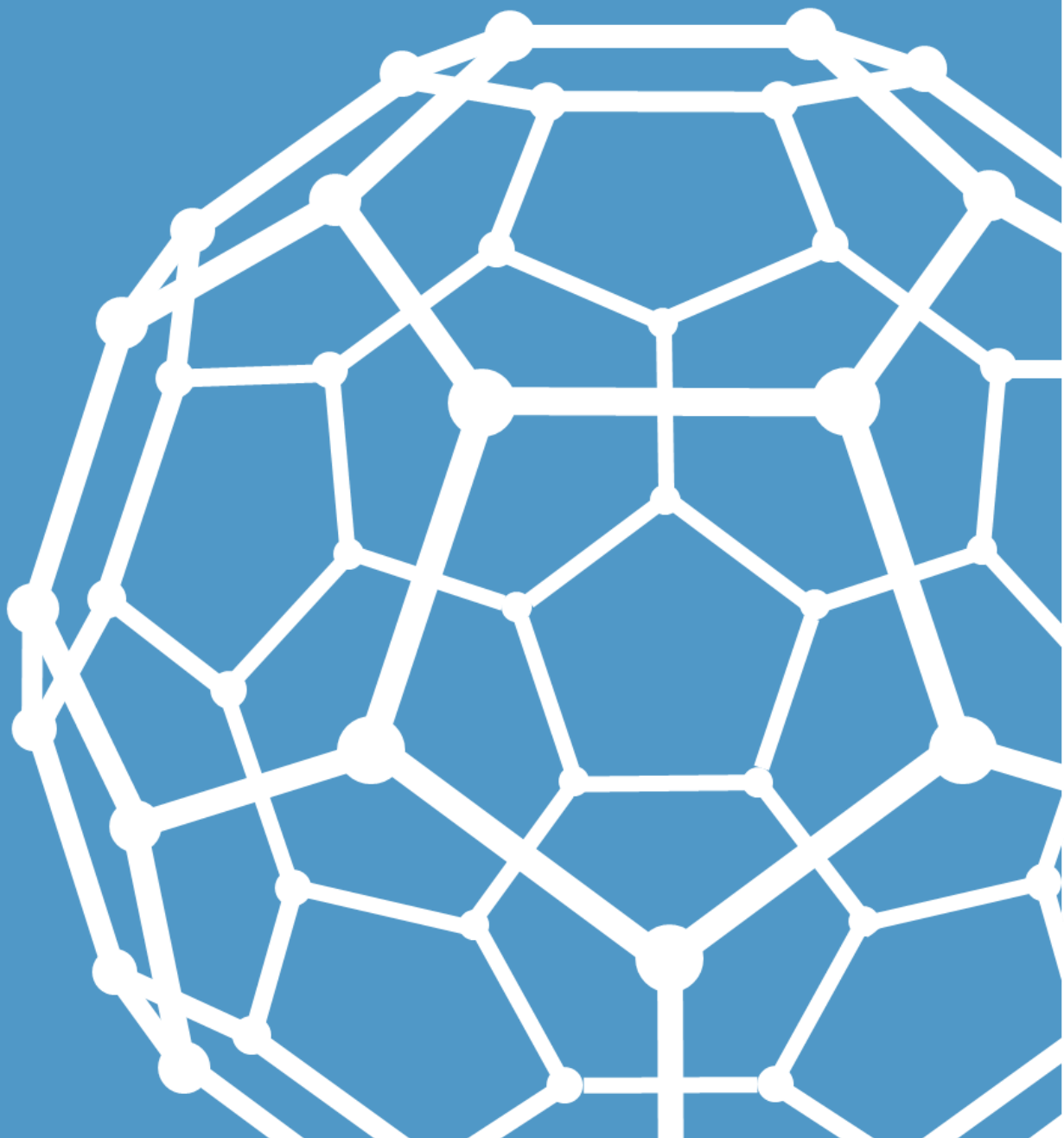
Praxis®

Using the Praxis Framework to implement GovS 002:

The Government Functional Standard for project delivery.



Introduction

The senior leader's guide to the project delivery standard states: "The standard describes the 'why' and the 'what' but does not describe 'how' anything should be done. It is for each organisation to choose the most appropriate way to use it".

The Praxis Framework is a free, on-line framework for project, programme and portfolio management that focuses on the 'how'. This document has been created to bring together the 'why' and 'what' from the project delivery standard with the 'how' from the Praxis Framework, in a simple and accessible way.

Praxis is a community driven framework. Its continued evolution and improvement depend upon the feedback of users and practitioners. If you have useful stories that will help others; content that they may find useful; ideas for additional content, please contact us at info@praxisframework.org and be part of the growing Praxis community.

The left-hand, shaded column in this document contains the text of the Project Delivery Standard (PDS). All diagrams are also taken from the PDS. The right-hand column explains the Praxis Framework approach to the policies set out in the PDS and provides links to the relevant detail with the Praxis Framework web site.

Note: This document is not a replacement for the official standard, it is a supporting document and should be used alongside the UK Government issued documents.

Contents

1. About this government functional standard

1.1. Purpose of this standard

The purpose of this government standard is to set expectations for the direction and management of portfolios, programmes and projects ensuring value for money and the successful, timely and cost-effective delivery of government policy and business objectives.

This standard provides direction and guidance for:

- permanent secretaries, directors general, chief executive officers of arm's length bodies and suppliers, ensuring an environment exists which promotes delivery success and integrates with their other activities
- senior responsible owners, ensuring the breadth of practices required for successful delivery are used
- owners of departmental methodologies, developing processes and techniques which are consistent in scope across government
- assurance and audit bodies, for testing best practice
- programme and project offices, managers and their teams introducing the practices

1.2. Scope of this standard

This standard applies to all government portfolios, programmes and projects:

- in all departments and arm's length bodies
- ranging from those listed in the Government Major Project Portfolio (GMPP) through to those at local business level
- whether for digital, infrastructure, transformation, service delivery, military capability, property, regulatory compliance or other purposes
- regardless of delivery methodology or technique used

The structure of the standard is shown in Fig. 1.

How Praxis supports the government functional standard

Purpose of the Praxis Framework

The purpose of Praxis is to provide guidance on all good practices for project, programme and portfolio management in an open, free and community driven way.

It combines the best from many other guides mentioned in the functional standard but in an integrated and consistent way with a single taxonomy and terminology.

Using the Praxis Framework enables owners of departmental methods, assurance and audit bodies, programme and project offices etc. to access free guidance that can be used under a Creative Commons licence which is similar in principle to the Open Government licence.

Praxis also avoids the need to combine, reconcile and harmonise multiple guides in order to meet all the requirements of this functional standard.

One of the generic goals of level 2 capability maturity is that there should be an organisational policy for managing projects, programmes and portfolios. This delivery standard meets that requirement.

Scope of Praxis Framework

The Praxis Framework applies to all projects, programmes and portfolios. It is not limited to any one sector, industry or type of work.

Praxis provides generic guidance that equally applies to public and private sectors, construction, engineering, IT and business change regardless of delivery methods and techniques.

Praxis does not make any specific references to the Government environment. Such references in the delivery standard have no equivalents in Praxis.

1.3. Government functional standards references

The following standards are necessary for the use of this standard:

- GovS 003, Human resources
- GovS 006, Finance
- GovS 007, Security
- GovS 008, Commercial
- GovS 010, Analysis

Note: new functional standards are being created and trialled during 2018 and early 2019. All the above standards will be available for use by April 2019.

Outside the scope of Praxis

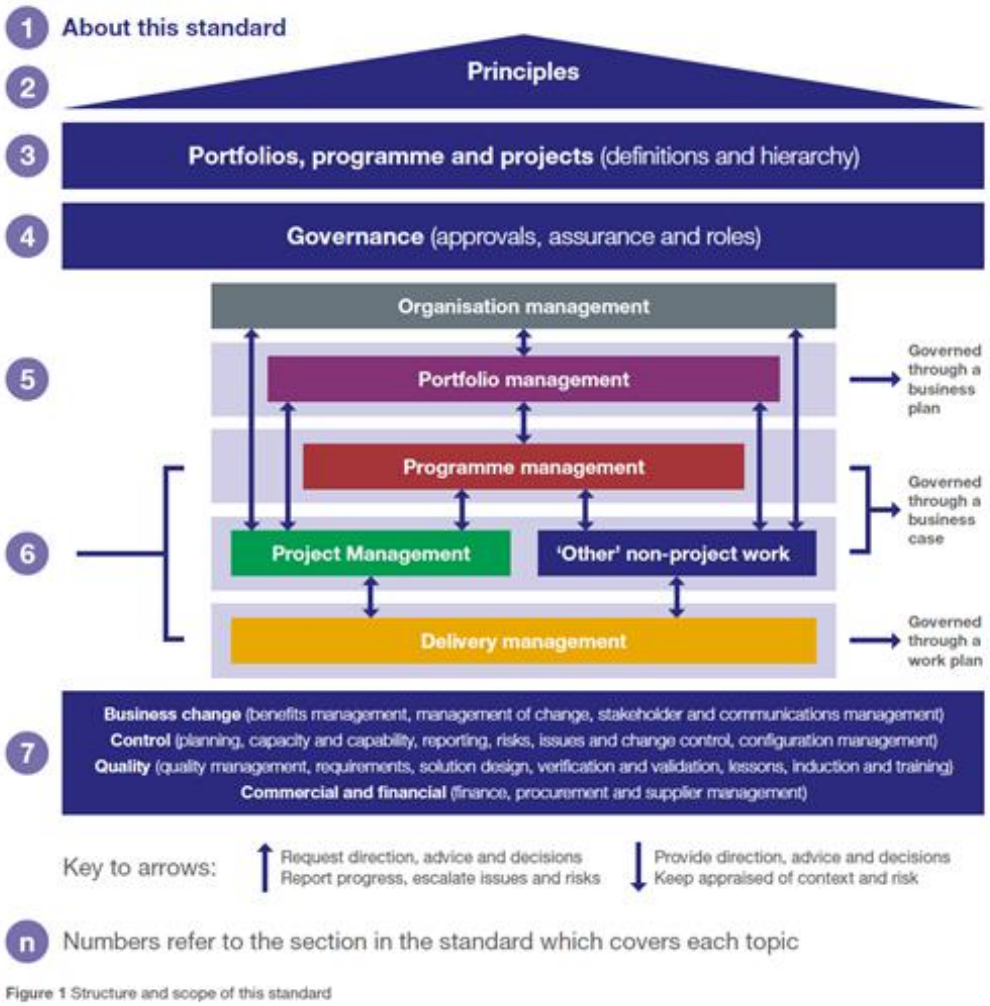


Figure 1 Structure and scope of this standard

2. Principles

How Praxis supports the principles

The hyperlinks in this column lead to the web site *www.praxisframework.org*

At all times, those directing and managing portfolios, programmes and projects shall ensure:

The phrase "at all times" reflects the fact that the application of 'best practice' is not something that is done when initiatives are set up or reviewed.

Applying best practice is a continuous, real time activity. Praxis aims to embed best practice by making it accessible and evolutionary.

The free web site is always available and is regularly updated with new ideas and the latest thinking.

1. delivery objectives are aligned to government policy and organisational objectives

Praxis advocates that all projects, programmes and portfolios adhere to organisational strategy.

2. continuing business justification to confirm benefits can be realised and risks managed within the organisation's risk appetite, and that unjustified work is terminated

Continuous business justification is a central tenet of Praxis though the management of the business case throughout the life cycle and the processes that manage each phase of the life cycle.

3. governance, management frameworks and controls are proportionate and appropriate to the work and the level of prevailing risk

The Praxis Framework is hierarchical to allow for different levels of complexity. It can support whatever level of governance is appropriate to the task in hand.

The on-line 360° checklists also ensure that managers, SROs, sponsors, directors, team members and stakeholders are in agreement as to the effective application of governance.

4. accountabilities and responsibilities are defined, mutually consistent and traceable across all levels of management

The current version of Praxis does not go into detail on role definitions although it does identify high level responsibilities with the project, programme and portfolio life cycles.

The competency section provides a library of competencies that can be used in role definitions in accordance with the delivery standard.

5. experience and lessons are captured, shared and used to promote future performance improvement	The capture of experience in the lessons log and the use of these lessons at the outset of each new project or programme is built into the Praxis process model. Future performance improvement is assisted by the use of checklists that also serve as a means of monitoring improvement through the development of organisational maturity.
6. work is appropriately defined, planned, monitored and controlled, and quality actively managed to maximise the likelihood of success. Defined working methodologies are tailored for use accordingly	All elements of Praxis are focused on this goal. Guidance is given on how the framework may be tailored.
7. outcomes and enabling outputs will meet the need and be validated by stakeholders	Techniques such as requirements management, solutions development and control used in conjunction with stakeholder management to ensure this happens.
8. work is undertaken in multi-disciplinary teams and is assigned to people who have the required capability and capacity	Praxis refers to personal capability as 'competence'. Every function and process has a corresponding competence definition and ensuring that team members are competent is a key attribute in the capability maturity model.
9. the transition of capabilities to operations is planned and programme or project closure managed, with ongoing operational responsibilities agreed and accepted	The benefits management and change management functions and the benefits realisation process combine to ensure that capabilities are transferred. The closure process deals with the hand-over and administrative closure.

3. Portfolio, programme and project management

Portfolio, programme and project management is an integrated way of meeting the government's ambitions, driving better decisions and increasing the likelihood of successful outcomes. Collectively, portfolio, programme and project management are referred to in government as **project delivery**.

A portfolio comprises part or all of an organisation's investment required to achieve its objectives. Governed through its portfolio (or business) plan, a portfolio comprises **work components**, such as other portfolios, programmes, projects, other work and work packages.

A programme is a temporary, flexible organisation created to co-ordinate, direct and oversee the implementation of a set of projects and other work components, to deliver outcomes and benefits related to a set of strategic objectives. Programmes can be undertaken in one or more tranches (phases), each of which is structured around distinct step changes in capability and benefit realisation.

A project is a temporary management environment, undertaken in stages, created for the purpose of delivering one or more business products or outcomes. A project might be standalone within a portfolio or part of a programme.

The Praxis approach to project, programme and portfolio management

The term 'project delivery' is a useful collective term for the management of projects, programmes and portfolios. The reason it is necessary to define a collective term is that so much effort has been put into defining three separate domains that are in fact simply points on a spectrum. Praxis treats projects, programmes and portfolios as points on a spectrum rather than mutually exclusive entities.

Praxis describes two types of portfolio structured and standard:

- A structured portfolio is one that co-ordinates projects and programmes that collectively achieve strategic goals.
- A standard portfolio is one that is simply a collection of projects and programmes performed by an organisation that are not unified by a business plan. For example, the set of projects performed by a construction contractor for different, unconnected clients.

The governance and management of projects and the governance and management of programmes have many more commonalities than differences.

This is evident from the fact that they are combined in section 6 of the delivery standard.

Praxis echoes this approach by combining project and programme practices throughout the framework.

Other work might include:

- support services (see 4.4.6), solution architecture, finance and HR
- ongoing improvement initiatives not run as projects, but using a defined approach, such as agile delivered platform based upgrades (see **Annex E**), six sigma and LEAN
- service delivery, business as usual operations

Note: stages can represent agile releases and work packages might represent sprints.

Praxis generally refers to these areas as 'business as usual'.

A work package is a set of information relevant to the creation of one or more deliverables or outputs. It comprises a description of the outputs required, work plan and details of any constraints.

Figure 2 shows the hierarchical relationship between work components, with each higher-level component comprising the sum of all connected lower level components.

Work components may cross organisational and departmental boundaries.

The management of a work package is covered by the development process.

Note: the use of the terms 'project' and 'programme' varies across government and is not always indicative of the formal definitions in this standard. The distinction is important when designing a programme or project governance and management framework.

Praxis regards projects and programmes as simply points on a spectrum. While other guides seek to apply closed definitions, Praxis takes a more flexible approach that is described in this article.

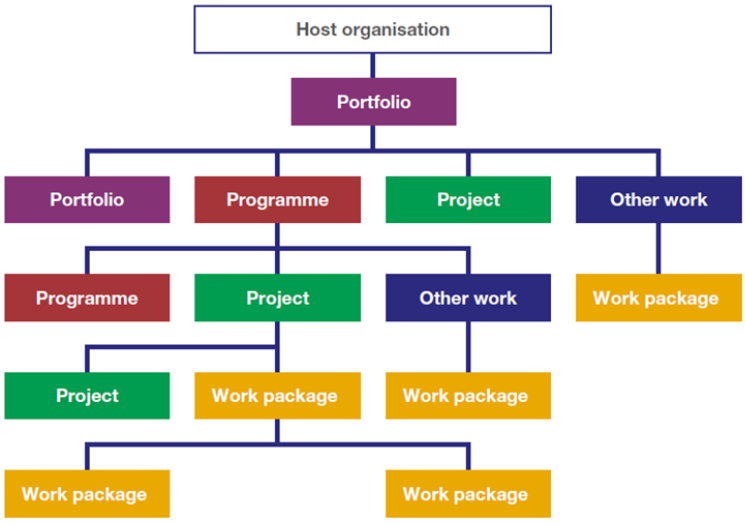


Figure 2 Example of a hierarchy of work components

4. Governance

4.1. Governance framework

Governance comprises authorising, directing, empowering and overseeing management. The governance of portfolios, programmes and projects should be an integrated part of the organisation's overall governance.

A governance framework shall be:

- established which complies with government and departmental policies and directives and with this standard
- referenced from the respective Accounting Officer System Statement [17]

The governance framework should include the authority limits, decision making roles and rules, degree of autonomy, assurance needs, reporting structure, accountabilities and responsibilities together with the appropriate management frameworks (see sections 5.2 and 6.2).

Programmes or projects meeting one or more of the following characteristics should be referred to the HM Treasury team spending team for inclusion on the Government Major Project Portfolio (GMPP):

- above the delegated authority limit for the organisation
- could create pressures leading to a breach in departmental expenditure limits, administration cost limits, or estimates provision
- would entail contractual commitments to significant levels of spending in future years for which plans have not been set
- could set a potentially expensive precedent; is novel and contentious; or could cause significant repercussions, posing risks to the public sector
- requires primary legislation or where HM Treasury consent is a statutory requirement. Programmes and projects not meeting the above criteria may be added to the Government Major Project Portfolio with the agreement of IPA and HM Treasury spending team

The Praxis approach to governance

Guidance on authority limits, decision making roles, degree of authority etc. are highly context sensitive. Praxis does not seek to provide generic guidance on these matters but does address important areas of project, programme and portfolio governance such as sponsorship, knowledge management and capability maturity.

Outside the scope of Praxis Framework.

Programmes and projects should have a defined and integrated plan for undertaking assurance and approvals which should be developed with the initiation documentation, regularly reviewed, updated and maintained until closure.

The Praxis process model for projects and programmes includes approval points and guidance on reviewing and updating management plans (which collectively form the integrated plan).

For government major projects, this shall be in the form of an Integrated Assurance and Approval Plan (IAAP), which shall be validated by HM Treasury and the Infrastructure Projects Authority. HM Treasury will not normally approve a programme or project without a validated IAAP.

Outside the scope of Praxis

Government major projects shall be reported through the Government Major Projects Portfolio see section 7.2.3.

Note: see: Treasury approval process [14]; guide to integrated assurance and approvals [12]; Treasury assurance frameworks [16].

4.2. Assurance

Assurance is the systematic set of actions necessary to provide confidence to senior leaders and stakeholders that work is controlled, on track to deliver and aligned with policy or the department's strategy.

In Praxis, assurance is covered by the topic of the same name. Its goals are to:

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

Organisations should have a defined and consistent approach to assurance (e.g. Integrated Assurance Strategy (IAS)) as part of their assurance framework [16].

Note: see Assurance frameworks for more on three lines of defence [16].

Assurance should be undertaken on at least three levels, such as:

1st line: carried out by the operational management that own and manage risk to ensure appropriate standards are being used;

2nd line: undertaken by, or on behalf of, those who have no first line responsibilities, to ensure first line of defence is properly designed, in place, and operating as intended;

3rd line: carried out by internal audit, or other independent body, to provide senior management with an objective opinion on the effectiveness of governance, risk management, and internal controls, including the

effectiveness of the first and second lines of defence.

Assurance reviews shall be scheduled prior to significant decisions (such as approval gates) to provide decision makers with an assessment of the status and outlook for the work. For government major projects, these assurance reviews shall be undertaken by the Infrastructure and Projects Authority. The time lapse between assurance reviews should not be scheduled to exceed one year.

Programme reviews should be planned to minimise the impact on the programme team and reviewers (e.g. by combining project and programme reviews as shown in Figure 3), whilst remaining rigorous.

Note: Infrastructure and Projects Authority's Assurance tool kit provides guidance for undertaking assurance reviews [3].

References to Government Major Projects and the IPA are outside the scope of the Praxis Framework.

4.3. Approvals and authorisation - decision making

Decisions should be made in a timely manner by evaluating alternative choices against agreed criteria. Stakeholders and subject matter experts should be consulted. Decisions might relate to:

- approving strategy
- initiating a programme or project
- starting a new project stage e.g. gate or decision point (see 6.3, life cycles) or a new programme tranche
- suspending or terminating work
- selecting suppliers
- deciding options for further study
- selecting the solution
- approving plans and baselines.

Decisions may be conditional, with responsibility for fulfilling such conditions defined.

Approvals and authorisation are built into the Praxis procedures and processes. For example:

- approval of the brief at the end of the identification process
- approval of the definition documentation (including the business case and management plans) at the end of the definition process
- review, assessment and approval of updated documents in the boundaries process
- assessment and authorisation in the change control procedure
- assessment and baselining of requirements in the requirements management procedure

Decisions should be:

- holistic, taking account of the external context, whole life of outputs (such as in life service, disposal) and negative impacts;
- phased to take into account risk (see 6.3, life cycle)
- communicated to the relevant stakeholders.

A programme or project shall be governed through a business case. If a project is part of a programme, its business case may be included within the programme's business case. A business case should demonstrate strategic, economic, commercial, financial and management justification [5].

The business case should be developed over a number of phases and should be updated to reflect changes and reviewed prior to every gate or decision point to justify continuing the work.

The Accounting Officer shall approve government major projects prior to submission to HM Treasury for approval [14]. Accounting Officer approval shall be supported by an Accounting Officer Assessment for the outline business case and, when advised by the senior responsible owner, for any subsequent, materially changed business cases [18].

Note: Guidance on investment appraisal, business cases and evaluation is provided in the HMT's Green Book [5].

4.4. Roles and responsibilities

Roles and responsibilities for those working within a portfolio, programme, project or other work component shall be defined. This includes, but is not limited to, who each is accountable to and what activities, outputs or outcomes they are responsible for.

Note: guidance on roles and responsibilities is provided in AXELOS' guides [Annex A 21-28]

Note: the Project Delivery Capability Framework [13] includes the professional standards for a range of project management roles operating at different levels.

Authorisation is also built in to the delivery process through the application of tolerances and management of issues. The interfaces between the delivery and development processes also build in a level of authorisation (as part of delegation) and approval (in the form of product acceptance through quality control).

The initial development of the business case and its evolution through the life cycle are addressed primarily by the business case management topic but also by the checks and balances built into the Praxis process models.

Outside the scope of Praxis.

The current version of the Praxis Framework does not contain a detailed section on roles.

The organisation management topic explains the main roles in the project, programme and portfolio environment. The processes in the method section describe the responsibilities these roles take on at different points in the life cycle.

4.4.1. Accounting officer

The senior official in a central government organisation is accountable to Parliament and the public of high standards of probity in the management of public funds, including for projects. The equivalent senior leaders of other public sector organisations are expected to perform a similar role.

Note: the Accounting Officer or, in an arm's length body, the CEO, is generally the Permanent Secretary. See Managing Public Money [1], Cabinet Office Controls [2], Assurance framework [16], Accounting Officer System Statements [17] and Accounting officer assessments [18].

This is government specific and outside the scope of Praxis.

4.4.2. Portfolio director

The portfolio director is accountable to a defined higher authority for the direction and governance of the portfolio, for realising the required benefits at an acceptable level of risk. The portfolio director provides leadership and direction and owns the portfolio strategy and plan.

NOTE: the higher authority depends on the context and might be the Accounting Officer, a departmental, ALB or executive board or a portfolio board.

Note: see Annex C for more detail on this role.

Referred to in Praxis as the Portfolio sponsor.

4.4.3. Portfolio manager

The portfolio manager is accountable to the portfolio director for managing a portfolio as a whole and ensuring its work components are sufficient to meet the objectives, including monitoring spend against budget and benefits realisation. The portfolio manager leads and coordinates the effective and efficient operation of portfolio management and ensures the flow of information to decision makers.

Note: see Annex C for more detail on this role.

Referred to in Praxis as the Portfolio manager.

4.4.4. Senior responsible owner (SRO)

The senior responsible owner is ultimately accountable for a programme or project meeting its objectives, delivering the required outcomes and realising the required benefits. The senior responsible owner owns the

Referred to in Praxis as the sponsor, which may be in the context of a project or a programme.

business case and is accountable for all aspects of governance (see section 4).

The senior responsible owner of a government major project is accountable to Parliament. For other projects it shall be clear who (which sponsoring group) the senior responsible owner is accountable to.

Note: Infrastructure and Projects Authority's SRO briefing note provides relevant documentation for SROs on assurance [4].

Note: see Annex C for more detail on this role.

4.4.5. Programme/project manager

The programme/project manager is accountable to the senior responsible owner for establishing the governance framework and for the day-to-day management of a programme/project, to deliver the desired outcomes and products, and realise the required benefits.

Note: the title of a programme/project manager can reflect the seniority of the person, such as "project director" or "programme director" or the type of work being undertaken, such as in agile delivery.

Note: see Annex C for more detail on this role.

Referred to in Praxis as the manager, which may be in the context of a project or a programme.

4.4.6 Portfolio, programme and project support office manager

The management team should be supported in the effective and efficient undertaking of their roles. Services provided might include value-added delivery support, such as defining processes and methodologies, undertaking analysis, operating aspects of governance, consulting and undertaking delegated responsibilities, as well as administrative functions. Support might be provided by single or multiple physical or virtual structures, i.e. offices (permanent and/or temporary), which might be centralised or distributed.

Note: the title of these roles may be chosen to reflect the scope and seniority, such as PMO Director, PMO Manager, Head of PMO or P3O® Director

Note: see Annex C for an example for a programme or project office manager role.

Praxis refers to the PMO at various points. The PMO may be limited to a support function (in which case it would probably be referred to as a PSO) or may be constituted at the top-level authority for project delivery.

It is implicit that this group would be led by a PMO manager or director.

4.4.7. Other management and team roles Other management and team roles should be defined to suit the needs of the work required, for example those managing the development of specialist outputs. Examples include roles relating to agile delivery, service and operations management, business change, communications and various engineering disciplines. Note: see Annex C for an example for a work package or team manager.	The definition of these context specific roles is currently outside the scope of Praxis.

5 Portfolio management

5.1 The purpose of portfolio management

Portfolio management is a coordinated collection of practices and decisions that together enable the most effective balance of organisational change and business as usual, whilst remaining within a specified funding envelope. Portfolio management should be an integral part of an organisation's business planning and control activities.

The portfolio director and manager should:

ensure investment is aligned to government

- policy and departmental strategy
- maximise benefits realised by the portfolio as a whole
- balance the portfolio to cover short and long-term objectives
- ensure risks across the portfolio are within the organisation's risk appetite
- optimise the organisation's capability and capacity to ensure the portfolio can be delivered
- ensure those impacted by the portfolio's outcomes are able to take on the changes
- optimise the use of funds and resources, bearing in mind the associated risks

5.2. Portfolio management framework

A portfolio management framework, defining how a portfolio is to be directed and managed, shall be defined and communicated to appropriate stakeholders. The portfolio management framework should include:

- authority and decision-making roles and processes, including, but not limited to, governance (see section 4), identification and submission of potential work components, categorisation, prioritisation and initiation of new work, allocation of resources and funds, and issue resolution

The Praxis approach to portfolio management

The concept of the portfolio is central to the Praxis Framework. As well as being the vehicle for co-ordinating projects and programmes, the portfolio is seen at the guardian and promoter of good practice.

Praxis defines two types of portfolio: standard and structured. A standard portfolio is a collection of strategically unconnected projects and programmes (typically performed by a contractor organisation) while a structured portfolio is the sum of projects and programmes required to deliver organisational strategy.

Balancing and optimising the portfolio are key components of the management process in the portfolio process model.

The functions contained in the knowledge section of the Praxis Framework are designed and written to apply across projects, programmes and portfolios. The principles and goals of the functions remain constant but the way the functions are applied vary from projects through to portfolios.

For example, the concept of management plans is just as applicable at portfolio level as it is to project and programme level. It is just the content that will be adapted to show how a portfolio will be directed and managed.

- roles and accountabilities, processes, methods, techniques, guidance, templates and tools
- the types of work component to be included in the portfolio, together with criteria to identify them
- criteria and techniques for categorizing and selecting the portfolio's work components; the planning horizons to be used and how often the plan should be reviewed
- a reporting framework

The portfolio management framework should align to and work with:

- the organisation's governance framework and decision-making authorities
- other organisational processes and practices, such as those for strategy and policy development, business planning, finance, performance reporting, capability and capacity management, enterprise risk management, and communications

A record of the portfolio's work components should be kept up-to-date, including, for each work component: component type; responsible persons; status (for example: proposed, in progress, suspended, terminated, completed); the position in the portfolio hierarchy; significant interdependencies between components under different senior responsible owners; an indicator denoting whether the component is required to be reported as part of the Government Major Projects Portfolio. Additional data may be included for management, analysis and reporting purposes.

Note: the portfolio management framework can be tailored from Management of Portfolios. Further guidance is in ISO 21504.

Note: Portfolio management responsibilities may be assigned as each department sees fit. For example, integrated with business planning; managed as a set of sub-portfolios. The organisation group undertaking portfolio management might provide other services, such as those provided by a programme management office (see 4.4.7), including, methods, advice, resourcing, tools support

The management of the portfolio's work components is covered by the co-ordination process. 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

References to the Government Major Projects Portfolio and is outside the scope of Praxis.

The use of Praxis Framework as opposed to guides such as Management of Portfolios and ISO21504 is that the structure and terminology is fully compatible with the project and programme parts of the framework. This makes tailoring of the portfolio framework alongside the project and programme frameworks far easier and less expensive.

5.3. Portfolio management practices

5.3.1. Portfolio definition and planning

The portfolio, as a whole, should be planned, as defined in the management framework, to meet the purpose listed in section 5.1. When planning the portfolio:

- government policy, strategic objectives, context and priorities should be understood, together with the current status of the portfolio and its work components. Strategy might be developed top down, from policy, or might emerge from operational experience
- potential new work components should be categorised and evaluated, based on their degree of strategic fit, expected benefits, efficient use of funds and risk. The views of stakeholders should be understood and considered
- work components should be prioritised and selected, based on the results of the evaluation, taking into account the performance of existing work components
- each work component should be traceable to government policy or departmental objectives
- the plan should be collated with interdependencies identified between components within and outside the portfolio
- once approved, the portfolio plan should be baselined and any changes approved by the appropriate authority

The initial definition and set up of a portfolio is covered by the initiation process.

Thereafter the definition and planning of component projects and programmes is addressed by the management process and the co-ordination process.

5.3.2 Validating portfolio objectives and strategy

The portfolio's objectives and strategy should be periodically reviewed to ensure:

- they are still current and affordable
- the right programmes, projects and other work are being undertaken

If not validated, corrective action should be taken to amend the portfolio's strategy and objectives or adjust the portfolio's work components.

This is addressed in the prioritise and balancing activities in the portfolio management process.

5.3.3. Monitoring and analysing portfolio delivery

The portfolio, as a whole, should be monitored and analysed with respect to:

- outcomes, and benefits realisation
- adherence to cost and schedule constraints delivery of primary outputs
- availability of finance
- current capacity and capability constraints in the organisation and supply chain
- current level of portfolio risk, including those related to interdependencies
- reaction of impacted parties and other stakeholders

The processes covering this are the portfolio management and co-ordination processes. They will draw on the project and programme processes together with functions such as benefits management, financial management and risk management – but applied at the portfolio level.

Stakeholders should be monitored and engaged, with new stakeholders identified and existing stakeholders revaluated.

This area is covered by stakeholder management.

New risks and issues should be identified and existing ones managed. Action should be taken to ensure the portfolio meets its objectives and reflects any constraints. Existing work components might be identified for amendment, rescheduling or termination. Corrective and preventative actions might trigger the need for new work components, scope changes or termination of work.

Risk management is addressed in the topic of the same name. While the change control topic is primarily about project and programme scope control, the procedure can be adapted to apply to any form of change review and decision making.

5.3.4. Portfolio performance reporting

Portfolio performance should be reported against the portfolio plan, including, but not limited to, financials, benefits, milestones and risk. Additional analysis and commentary might be needed to explain variances. Reporting should reflect both achievement to date and a forecast for future performance.

5.3.5 Approving the start of work components

New work components should be identified, defined and approved (in compliance with an approved approval process, see 4.3 on decision making) to start when indicated in the plan or as required by organisational priorities. Before being initiated, the portfolio manager should confirm the aims given in 5.1 are met, an impact assessment of financial, resource or technical capability is available and that the programme/project does not conflict with or duplicate other work.

See section 6.4 on identifying and initiating a programme or project.

Note: when approving the start of a work component, the problem or opportunity needs to be known, even though the solution and implementation approach might not be known.

6. Programme and project management

6.1. The purpose of programme and project management

Programme and project management are structured frameworks for defining and undertaking change within an organisation. They provide a framework for implementing business strategies and initiatives to enable government to achieve benefits of strategic importance. Programme and project management includes the planning, delegating, monitoring and control of all aspects of a programme or project and the motivation of those involved to achieve the defined objectives within the constraints of time, cost, quality, scope, benefits and risk.

6.2. Programme and project management framework

A programme and project management framework, defining how a programme or project is to be directed and managed, shall be defined and communicated. The management framework should include:

- authority and decision-making roles and rules relating to the programme and its constituent components, including, but not limited to, governance tiers, initiation of new work, prioritisation, assignment of resources and funds, and issue resolution
- roles and accountabilities, processes, methods, techniques, guidance, templates and tools to be used to undertake the practices in sections 6 and 7 of this standard

The management framework should align to and work with:

- the portfolio governance framework
- other organisational processes and practices, such as those for, finance, human resource management, performance reporting, capability and capacity management, risk management, and communications

The Praxis approach to programme and project management

Praxis provides a structured framework that includes a process model and set of functions (scope, benefits, risk etc.) that provide the 'how' of project and programme management, which supports the 'why' as explained in the delivery standard.

From the Praxis perspective, the delivery standard provides the 'policy' that is a requirement of level 2 in the capability maturity model.

The Praxis capability maturity assessment tool is a means of defining and communicating the framework. It enables all members of the project or programme organisation, including stakeholders, to develop a common understanding of the framework and confirm that it is working from their perspective.

The project and programme elements of Praxis are fully integrated with the portfolio element. Organisational practices are covered by the knowledge section and each function is described seamlessly through projects to programmes and on to portfolios.

Note: the management framework can be tailored from the AXELOS best practice guides [Annex A, 21 to 28], departmental methodologies or, for major projects, may be specially developed.

The material referenced in this document is all available free of charge on the Praxis Framework web site. APM Group Ltd. also provide hosting facilities to companies and organisations who wish to tailor a version of the Praxis Framework web site to suit their own context.

6.3. Life cycles

The life cycle is a phased structure for governing work and underpins the delivery plan, from start to finish. The life cycle should be defined and should include approval gates/decision points and assurance reviews.

Praxis discusses life cycles of different types in the topic of the same name. Approval gates are clearly shown and further described in processes such as identification and definition.

A programme may be phased in one or more **tranches** and might cover the whole life of a product, service or system (see Figure 3).

Praxis uses the term tranche in the same way as figure 3 but defines stages slightly differently than figure 4.

A project shall comprise stages, each of which shall be preceded by a **gate** (decision point) to approve the start of the next stage and commit resources and funding. The project life cycle should be defined to suit the circumstances. The number of gates and stages, types of assurance review and form of the business case should be chosen to ensure governance is appropriate to the circumstances, with simpler projects having fewer stages (minimum of two) and more risky projects having more stages. See Figure 4 and **Annex D**.

The reason for this is that the management practices in figures 3 and 4 are the same and should be related to a common life cycle. Praxis refers to life cycle phases to distinguish them from tranches and stages which are components of delivery.

The 'management practices' referred to in figures 3 and 4 are called 'processes' in Praxis and are described in the Method section.

The 'support practices' are referred to as functions and are described in the Knowledge section.

The following shall be defined for each gate:

- criteria for a "go" decision
- the decision makers
- who should be consulted
- the type of assurance review required prior to the decision (See 4.2.)

These requirements are supported by the decision requirements built into the Praxis process model.

Criteria should include, but not be limited to the following:

- work aligns with policy and strategy and is still needed
- the business case is acceptable; risks have been identified and are acceptable or can be mitigated
- the solution is (or is likely to be) acceptable
- there are funds and resources to complete the work and support any outcomes

The definition of these acceptance criteria is underpinned by the practices described in:

- business case management;
- solutions development;
- risk management;
- financial management and
- planning.

Gate decisions are triggered by a 'request for authorisation' submitted to the sponsor.

- there is a plan for the next stage and outline plan for the remainder of the work

A gate decision might result in approval to proceed, a request for work to be revised, or deferral or termination of the project.

Model project life cycles may be developed for undertaking particular types of project.

Note: Annex D includes a detailed example project lifecycle. Annex E includes an agile delivery example.

Similar examples are explained in the life cycle topic.

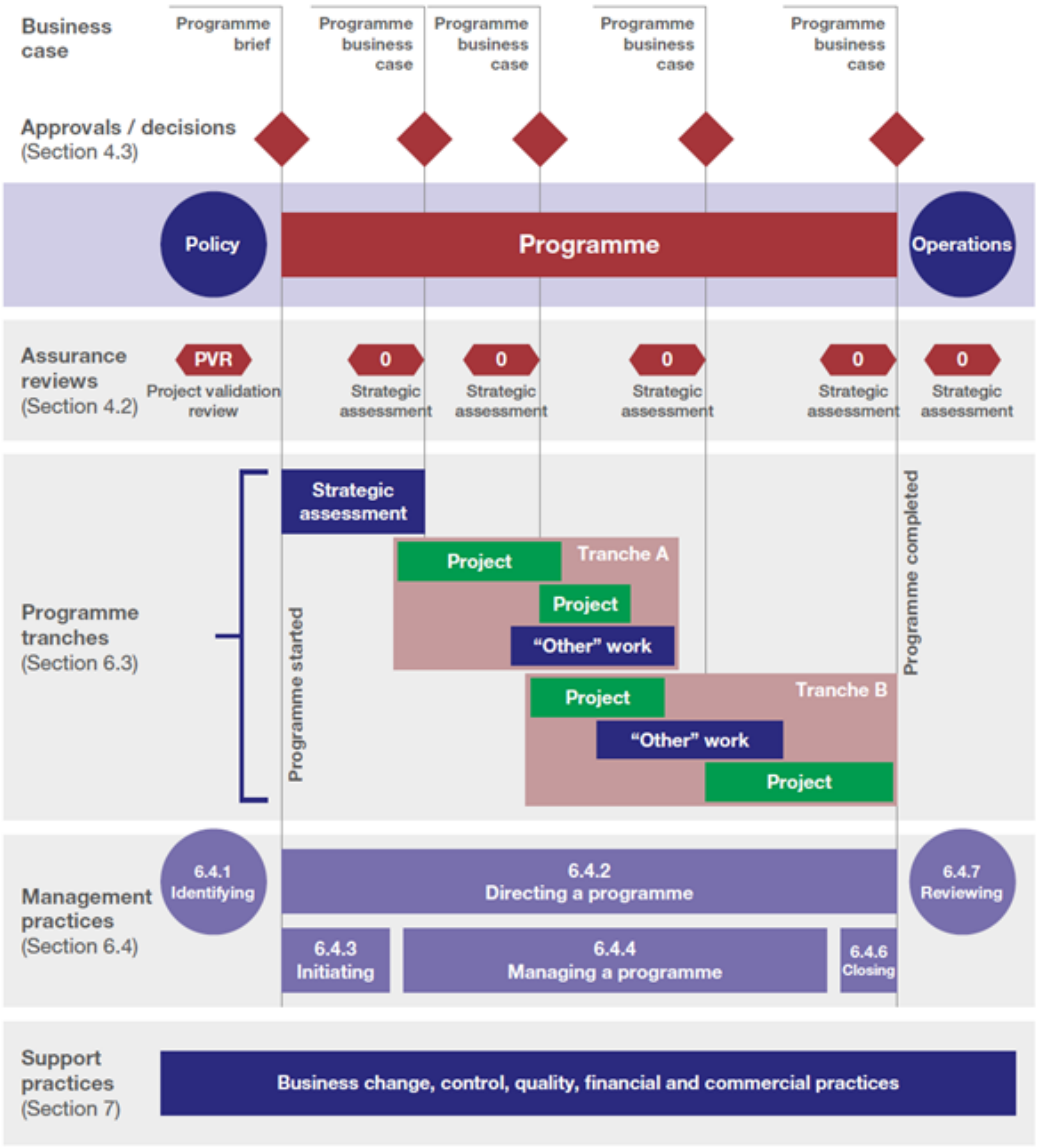


Figure 3 Example programme lifecycle, showing tranches, decisions and assurance reviews from section 4 and their relationship to the practices in sections 6 and 7

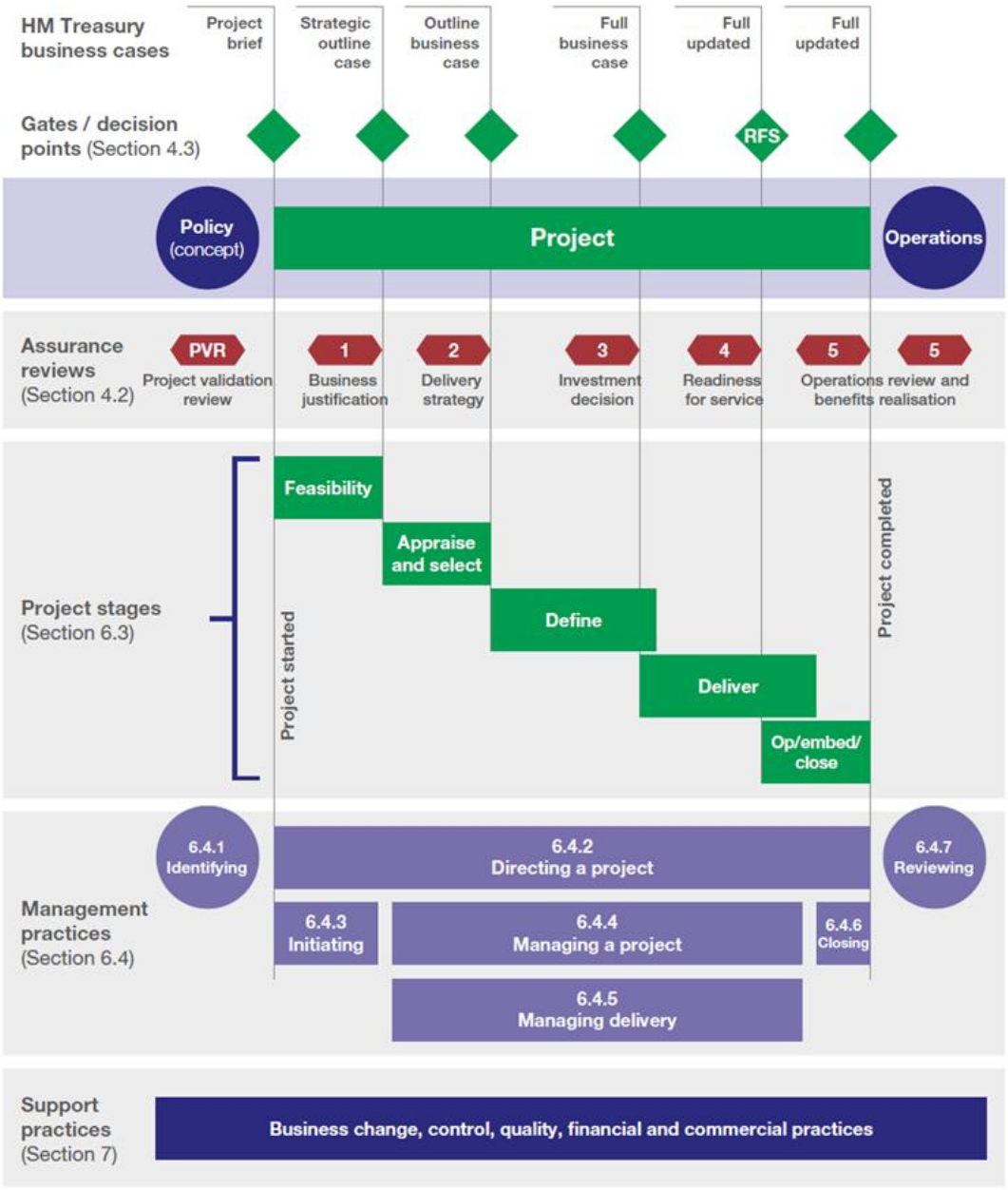


Figure 4 Example project life cycle with stages, gates and assurance reviews from section 4 and their relationship to the practices in sections 6 and 7

Note: phases for a project are typically called stages (PRINCE2® [22]). Stages may reflect the approach taken e.g. developed using an agile approach, such as discovery, alpha, beta (private); beta (public) or in "waterfall", such as analysis, design, development, testing, implementation.

Further detail and examples of a project life cycle are included in Annexes D & E.

The terms phase and stage are used in different ways in different guides. Praxis uses the terms to differentiate between the subdivisions of a life cycle (phases) and the subdivisions of delivery (stages).

6.4. Programme and project management practices

In Praxis, these management practices are represented by processes within the method section of the web site. Like the Project Delivery Standard, Praxis uses the same process model for projects and programmes. The underlying goals, principles and practices are the same, it is the level of complexity in which these must be applied that distinguishes between projects and programmes.

Each Praxis process starts with a set of goals. These goals are central to the Praxis Capability Maturity model. The path to effective and efficient project and programme delivery starts with the achievement of these goals.

6.4.1. Identifying - policy

Identifying a programme or project ensures that the policy or other objective for undertaking the work is defined and likely to be realistic before a team is mobilised and funds and resources committed.

The Praxis identification process has the following goals:

- 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.

The senior responsible owner shall be appointed. Potential team members and subject matter experts should be identified and be involved with policy formulation to ensure deliverability.

This is covered by the activity 'appoint identification team'.

Before a programme or project is submitted for approval, the senior responsible owner should ensure:

- the vision and justification for the programme or project, together with any strategic assumptions, should be documented in a programme or project brief
- policy and decision makers shall seek advice from experienced professionals on achievability and risks

These areas are primarily addressed in the 'prepare brief' activity.

Other relevant topics are business case management and assurance.

- the appropriate assurance review shall have been conducted (see section 4.2) - in the case of a new policy or business change initiative which is likely to result in a government major project, the review should be a Project Validation Review or equivalent

Policy and objectives may develop and change as the work progresses.

6.4.2. Directing

Directing a programme or project ensures continuing strategic fit and relevant in the prevailing business context.

The senior responsible owner shall ensure the solution fulfils government policy and/or meets the needs of the business and represents value for money.

The senior responsible owner shall provide direction and make decisions regarding the future of the programme or project, taking into account changes to the overall political, social, environmental, technological context and prevailing risk. This should include ensuring the programme or project remains justifiable and assurance reviews and approvals (such as at gates and at closure) are undertaken at the right time and corrective and preventative actions taken, if needed.

The senior responsible owner should refer decisions above their delegated authority to the appropriate decision makers, in accordance with the governance framework (see section 4.3).

Note: see also section 4.4.4, role of senior responsible owner.

Praxis refers to the person who owns the business case as the 'sponsor' rather than senior responsible owner. Hence, the topic that addresses the functions the sponsor should perform is called sponsorship and the way these interact with the management processes is simply called the sponsorship process.

The prevailing risk should also be considered in the light of the organisation's risk appetite and risk attitude.

Assessment of the contextual areas is often referred to a PESTLE analysis.

6.4.3. Initiating

Initiating ensures a programme or project is set up, defined and planned, and that the team is mobilised and understands what is required.

The senior responsible owner shall confirm a real policy or business need is being addressed, communicate the vision and objectives, together with strategic assumptions, and set criteria for measuring success.

In Praxis, this is referred to as the definition process. 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.

The programme or project manager should mobilise the team and facilities required to undertake the work and define the management framework to be used (see 6.2). The team should understand the requirement, assumptions, constraints and risk potential, and should investigate different solutions, delivery approaches and implementation options.

A plan for the work shall be developed, including approaches to be used for specialist work, taking into account lessons learned from previous, relevant work (see 7.2.1). The initial justification for the project shall be documented in a strategic outline case or programme business case (or equivalent).

Note: "Initiating" ensures the programme or project is started in a controlled way. The choice of solution might require a discovery stage (agile) or number of investigative stages to be undertaken. See 6.3 life cycle.

This activity is covered by the appoint definition team activity, which draws on the following functions:

- Mobilisation.
- Requirements management.
- Solutions development.

In Praxis the review of lessons learned takes place in the earlier identification process.

Planning takes two forms:

Planning the governance of the project or programme and planning the delivery of the project or programme.

In Praxis, initiating is performed by the definition process.

6.4.4. Managing

The programme or project manager should ensure the right team (including suppliers) and facilities are in place.

New tranches, stages or work should be planned and reviewed prior to approval (see section 6.3).

Work packages should be initiated and monitored against the plan or product backlog, risks mitigated, issues addressed and changes controlled. Lessons should be continually captured and managed (see sections 7.2).

Outputs should be developed ready for use (see section 7.3) and stakeholders' views should continue to be addressed ensuring any business changes are embedded new ways of working such that the desired outcomes are achieved (see section 7.1).

Commercial and financial aspects should be addressed (see section 7.4).

The continuing justification for the programme or project shall be monitored and business case updated, if appropriate (see section 4.3) in a controlled way (see 7.2.5).

This area is covered by the delivery process, the goals of which are 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.

Tranches and stages are initiated and concluded using the boundaries process.

Commercial and financial aspects are covered in procurement, contract management and finance management, while continuing justification is handled by business case management.

6.4.5. Managing delivery

Managing delivery ensures work to develop the outputs and outcomes is under control:

- work should be defined, planned, managed in work packages or sprints (see section 7.2.1)
- risks, issues, change requests and stakeholders' views should be addressed
- suppliers should be managed (see section 7.4)
- lessons should be continually captured and managed (see section 7.2)
- outputs should be developed using methodologies and techniques which are proportionate and appropriate and the quality verified (see section 7.3)

This is equivalent to the development process in Praxis. Its goals are to:

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

Relevant functions include:

- Risk management.
- Stakeholder management.
- Change control.

Specific development techniques such as scrum can be easily integrated.

6.4.6. Closing

A programme or project shall be closed in a controlled way. Closure of a project can happen when a project is completed as planned or terminated prematurely:

- delivery of outputs and achievement of outcomes to date should be confirmed
- responsibilities for on-going risks, issues, actions and benefit tracking should be handed over to, and accepted by, the appropriate business authority
- documentation and information should be securely archived (see 7.2.7)
- the team and any temporary facilities should be demobilised.

The programme or project manager, with the team and key stakeholders, shall undertake a closure review, which should include an assessment of performance against the plan and the extent to which objectives are being met.

New lessons should be captured and analysed together with those identified during the work, significant learnings should be captured and shared (see section 7.3.6).

Plans for post-closure reviews should be agreed by the senior responsible owner (see section 4.2).

Stakeholders shall be informed about closure.

The goals of the closure 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.

Responsibilities for on-going matters are documented in the follow-on actions report.

The handling of information is covered by information management, communication with interested parties is covered in stakeholder management and de-mobilisation of the project team is addressed in the demobilise activity.

The capture of new lessons learned takes place in the review activity.

Post closure reviews are also addressed in the benefits realisation process.

Note: termination might occur because the project is no longer needed or viable, or because the risks associated with it have become unacceptably high.

See the second goal of the closure process.

6.4.7 Reviewing outcomes

Reviewing outcomes determines the degree of the programme or project's success. The senior responsible owner should ensure a review is undertaken to assess of the extent to which benefits realisation and operational performance have met, and are likely to continue to meet, the objectives and expectations stated in the business case. Lessons should be captured and communicated.

A review of outputs and/or outcomes is included in the closure process. This includes a review and formal reporting of lessons learned.

A review of outcomes and/or benefits is included in the benefits realisation process.

7. Practices which support project delivery

The Praxis approach to project, programme and portfolio delivery

This section includes management practices which should be undertaken throughout delivery. These practices are the responsibility of the relevant manager, for example, portfolio manager for a portfolio, project manager for a project or team manager for a work package and may be delegated to a portfolio, programme or project support office manager (see section 4.4, roles). All support practices should be managed and monitored (see 6.4.4) using a defined approach that is improved through use.

Praxis refers to these supporting processes as functions. This is because they are the result of a functional analysis similar to that used to define topics in a Body of Knowledge.

For each topic there is also a capability maturity page with associated checklist. Using these checklists helps embed good practice and develop organisational capability to the level of continuous improvement.

Note: guidance can be found in the AXELOS guides [21-28], In addition, the APM and PMI bodies of knowledge [36-40] and British and international standards [29-35] can be referred to.

The advantage of Praxis is that is covers the same ground as the AXELOS, APM and PMI® guides but in a single integrated framework with a common structure and single, consistent terminology.

The method section in Praxis adopts a process model for managing the project and programme life cycle that is very similar to the AXELOS approach. However, it is also possible to use a PMI®/ISO21500 approach as detailed here.

Business and change support practices ensure successful project delivery through engagement with stakeholders and users and the embedding of the required business change or new service in the business. Business change aspects shall be addressed and planned from the start of the programme or project and addressed throughout the life cycle.

The change management topic addresses the subject of business change and references many standard works on the subject of change management, which are summarised in the encyclopaedia.

The change required to realise benefits should be identified as part of the benefits management procedure.

Like the delivery standard, Praxis does not regard benefits as being exclusive to programmes. Projects can also deliver benefits in non-complex situations.

7.1.1. Benefits management

Benefits management ensures benefits are realised in practice. The relevant stakeholders' expectations regarding the benefits to be realised should be understood by the team developing the solution. Benefits should be identified, analysed, defined, planned and tracked. Benefits should be assessed for a

The principles of benefits management are covered in the knowledge section. How this and change management fit into the project or programme life cycle is addressed under the benefits realisation process in the method section.

number of options before a solution is chosen (see 7.3.3) and included in a business case (see 4.3), in which potentially conflicting pressures, such as performance, scope, time, risk, cost, benefits are balanced. Each discrete benefit should be assigned to a benefit owner. Benefits should be reassessed throughout the duration of the work as new benefits might emerge as the work progresses and expectations might change. Benefits trigger points should be included in plans. Once triggered, actual benefits realisation should be tracked against the plan.

There should be two-way traceability between benefits, outcome, solution, outputs, requirements and objectives (see Figure 5).

How benefits management should be applied will be set out in a benefits management plan although on smaller projects this may simply be a section of a broader scope management plan.

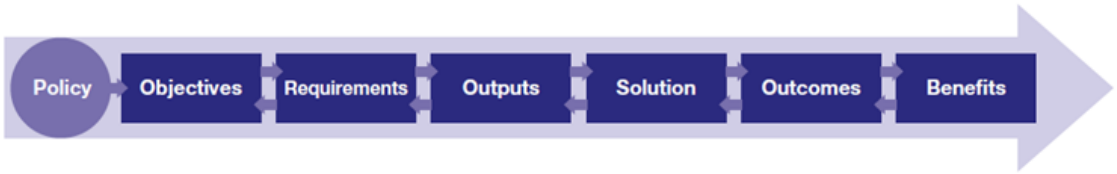


Figure 5 Example of benefits mapping, showing traceability from policy to benefits

Note: benefits mapping might be used to demonstrate traceability.

A benefits map is a form of influence diagram, an example of which is shown here.

7.1.2. Management of change

The purpose of managing change is to prepare, equip and support organisations and individuals (e.g. users, citizens) to change their approach and, where appropriate, behaviours. All programmes and projects should have a vision and blueprint for the future state, assess the current state of the target groups, use appropriate techniques to design and manage the required changes, continually assess the readiness of the target groups to accept the changes and track progress towards achieving the future state. Milestones, representing the achievement of outcomes, should be included in the plan. Once a transformed operating approach has been implemented, it should be monitored to ensure behaviours and practices do not revert.

The change management section explains the principles of the subject and provides links to models of change management such as Carnall and Kotter.

How change will be managed should be set out in a change management plan.

The life cycle process that make most use of change management is the benefits realisation process.

7.1.3. Stakeholder engagement

Stakeholder engagement ensures the needs and concerns of stakeholders are addressed sufficiently to enable the objectives to be met. A stakeholder is any individual, group or organisation that can affect, be affected by, or perceive itself to be affected by an initiative (programme, project, activity).

Stakeholders should be identified and their interests and expectations understood. A plan should be developed defining how to engage them in a co-ordinated and appropriate way. The engagement plan should be implemented, monitored and updated to reflect newly emerging stakeholders and changes in the position of existing stakeholders. Stakeholder attitudes should be assessed, updated and validated throughout the work.

Note: depending on the stakeholders, engagement might done in a number of ways, including face to face contact, meetings, or through collaborative working approaches, such as agile.

Praxis refers to this area as stakeholder management, within which the final step in the procedure is engagement.

How stakeholder management should be performed is explained in the stakeholder management plan.

The stakeholder management procedure utilises techniques such as stakeholder mapping to document the results of stakeholder identification and assessment.

Based on the assessment, a communication plan will illustrate how stakeholder communications fit in with other delivery plans.

These subjects are addressed in the communication topic.

7.1.4. Communications

Communications ensure interactions with the stakeholders are effective and likely to contribute to the successful delivery of the work.

Communications should be designed and coordinated to ensure the right messages are addressed to the right audience, at the right time and in a way which is acceptable to the recipients. Communications should be planned to match the stakeholders' needs and include feedback mechanisms and effectiveness measures. The impact of communications should be assessed and, where appropriate, responded to. The communications plan should be adjusted if needed, to achieve successful change.

Note: depending on the stakeholders, engagement might be through press releases/news channels, adverts, posters, social media, web sites, leaflets.

While communications with stakeholders can take many different forms, the underlying principles and objectives of communication are the same.

These are explained in the communication topic.

The stakeholder management plan sets out how communication will be conducted and the communication plans shows the timing of specific communication activities.

7.2. Control

Control support practices ensure work is planned and corrective and preventative

The control topic explains the fundamental principles of control while the delivery process describes how these should be applied during

actions taken to ensure delivery follows the baselined plan.

Work shall be defined, planned, monitored and controlled. Managers of work components should be set permissible tolerances within which no escalation is required to the next level of management. Tolerance levels might cover, but not be limited to scope, performance, time, cost, quality, benefit and risk.

7.2.1. Planning

Planning ensures the outputs and outcomes are likely to be delivered within the defined constraints (including scope, performance, time, cost, resources, risk) to achieve objectives and realise the required benefits. Planning should be a collaborative activity, where possible involving team members advising on planning their work. Estimates should be justifiable through evidence or experience such as reference class forecasting, consensus or experience from previous work. Plans may be for direct use or be created as contingency plans to be used in response to known risks.

The plan should be based on a hierarchy showing each work component's place in the hierarchy (see Figure 2). There should be single point accountability for every component and activity. Plans should be viewable at different levels of the hierarchy and show the level of detail appropriate to the needs of those viewing the plan. Depending on the level of the plan (portfolio, programme, project or work package), a plan might include forecasts of benefits (if applicable), milestones, activities, schedule, cost and resources, with associated assumptions, constraints, critical paths and risk. Dependencies between activities and other work components (such as programmes and projects) should be defined. The plan should include and allow for assurance and decision-making activities (see sections 4 and 6.3).

Note: a plan might be included in a single document or information source or distributed across a number of sources.

Note: a number of different hierarchies can be used to provide different perspectives on a plan, such as product breakdown, cost breakdown, epic and user story.

the delivery phase of the project or programme life cycle.

Praxis identifies two types of planning, management planning and delivery planning.

Management plans describe how scope, time, cost, resources, risk, etc. will be managed.

Delivery plans describe the work required to deliver the objectives, including schedules, risk registers, communication plans etc.

Different estimating techniques will be used dependent upon the level of scope information available.

Hierarchies are usually presented as breakdown structures and accountabilities in a responsibility assignment matrix.

Summarised schedules may take the form of milestone charts.

Forecasts of benefits will be shown in benefit profiles.

Assumptions and constraints should be documented in a business case.

Dependencies between activities are typically shown in a precedence diagram (used as a basis for techniques such as critical path analysis) whereas higher level relationships (e.g. between outputs and benefits) would be shown in an influence diagram.

Planning might be iterative and progressive through the life cycle of a work component, with more detail for the immediate future than for more distant work. Scope might be refined and clarified as work progresses to develop a plan which can be delivered at an acceptable level of risk. A plan may include an indication of the current level of certainty by, for example, using ranges or confidence indicators.

Once approved, plans shall be baselined and progress regularly monitored and analysed. Forecasts should take into account progress to date and prevailing assumptions and risks. Plans should be updated, especially prior to significant decision points, such as project gates. Any changes to a baseline plan outside agreed tolerances shall be undertaken in a controlled way (see 7.2.5).

Scope may be developed progressively as part of a parallel (or iterative) life cycle.

Differing levels of schedule detail for more distant work may be shown in approaches such as rolling wave planning.

Statistical approaches to uncertainty include Monte Carlo analysis, and managed using tolerances.

All relevant management functions in Praxis (Scope, Schedule, Cost etc.) refer to baselines and the delivery process contains specific activities driven by tolerances.

Changes are handled by the change control procedure.

7.2.2. Resource, capacity and capability management

Resource, capacity and capability management balances the supply and demand for appropriate resources (such as people, equipment, material and facilities) to be deployed when needed. Resources might be sourced from within government, by recruiting or from the supply chain.

A comprehensive view of future resource needs should be developed and maintained, with possible shortfalls identified and addressed. Resources should be acquired or developed to meet the planned needs If insufficient resources are available, work should be re-planned to reflect such constraints. Business continuity measures should be in place in the event of the loss of critical resources. See 7.4.2.

Note: “appropriate resources” means, for materials, equipment and facilities, the required quantity with the right specification. For people it means, the right skills, competences and expertise to undertake the work; see [13].

The resource management topic in Praxis is a high-level topic that is broken down into more detailed topics that cover the acquisition and management of both internal and external resources.

Understanding the capacity and demand for resources is covered by schedule management and, in particular, resource scheduling.

In this context ‘capability’ can also be referred to as competence. The framework contains a collection of competencies that contains a definition of individual competence in every appropriate topic from the knowledge and method sections.

Individual competence is a vital component of level 2 capability maturity.

7.2.3. Reporting

Reporting ensures the management team(s) and interested parties are aware of the current status and outlook, particularly with respect to the likelihood of achieving the objectives.

Praxis identifies two categories of report: time driven and event driven.

Time driven progress reports are produced and distributed at regular intervals while event driven progress reports are produced and

A reporting framework should be designed to meet the needs of the identified report recipients in a timely manner. A report should highlight progress to date, whether the current work scope is likely to be completed to plan, prevailing risks and issues and any decisions or direction required.	distributed to coincide with specific events, whenever they may occur. How these reports should be used will be set out in the control management plan and scheduled in the communications plan.
Appropriate milestones and performance indicators, should be included in the report. Performance indicators should reflect the delivery method used (e.g. backlog for agile delivery).	Different contexts will supplement these with specific types of report ranging from burndown charts (agile), line of balance (construction), milestone slip charts (high level – all forms of delivery).
Each report should state the period or date the report is related to and the date on which the report was published, or if live, created. The form of a report should be appropriate and proportionate to the work being reported on (e.g. Gantt, slippage, visibility chart, burn-down) and the roles being reported to.	
Government major projects shall be reported annually, with quarterly updates in a format defined by the Infrastructure and Projects Authority and in accordance with the Government's transparency policy [15]. *Note: reporting applies to information flowing within and between portfolio, programme, project and work package teams. Information flow with wider stakeholders is dealt with in "7.1.4 Communications"*	Outside the scope of Praxis
7.2.4. Risk and issue management Risk and issue management ensures objectives are more likely to be achieved, bearing in mind uncertainty, unexpected events and threats or opportunities from undertaking the work, using the solution and from the external environment.	Praxis separates risk management from issue management. Issue management is covered by the escalation procedure in the delivery process. The application of risk management will be set out in a risk management plan whereas the approach to issue management would be set out in the control management plan (particularly in the section on 'corrective action).
A risk is an uncertainty of outcome (positive or negative).	Negative risks are commonly referred to as 'threats' and positive risks are commonly referred to as 'opportunities'.
An issue is a relevant event that has happened (or is inevitable), was not planned and requires management action. It could be a problem,	Praxis follows the APM definition of an issue rather than the PRINCE2 definition and regards an issue as something outside of the manager's

benefit, query, concern, change request or a risk that has occurred.

Risks and issues should be:

- identified, assigned an owner and evaluated, taking into account the impact and the timing of triggering causes (proximity)
- responded through mitigating actions to eliminate, reduce or avoid consequences or reduce the possibility of occurrence; risks may be accepted
- monitored to resolution and closed when no longer valid; residual and secondary risks, if any, should be identified and responded to

Risk controls should be reviewed to ensure they are still effective.

Risks should be managed as individual risks and collectively. Contingency may be retained at an appropriate level in the work hierarchy and authorised, if needed.

authority or delegated tolerances that must be escalated to the sponsor.

Identification, assessment and implementation of responses are all covered by the risk management procedure and documented in the risk register using various qualitative and quantitative techniques explained in the encyclopaedia, such as probability/impact assessment and Monte Carlo analysis.

Praxis distinguishes between 'risk events' and general risk as these are often addressed using different risk techniques.

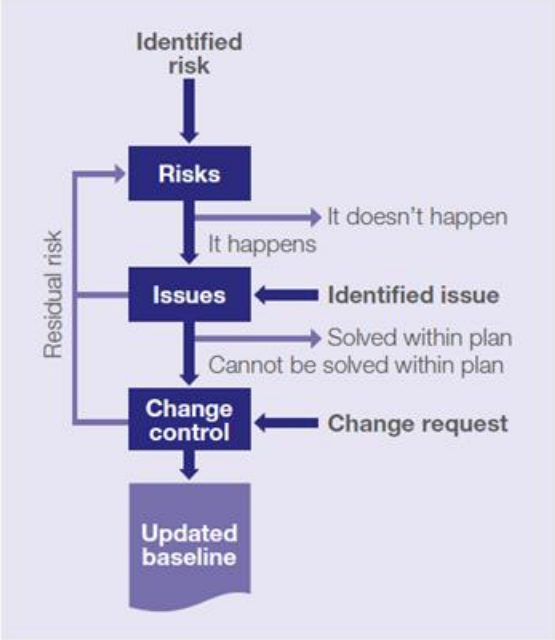


Figure 6 Relationship between risks, issues and changes

The processes and procedures within Praxis support this diagram. However, it should be noted that not all issues arise from risk events that happen, and not all change requests are in response to issues that cannot be resolved within plan.

Overall risk should be managed within the organisation's risk appetite and tolerance.

Risks might be related to:

- the chance of an event occurring and its potential consequences

Risk appetite and risk attitude are covered with the risk context topic.

To minimise the confusion between these two types of risk, Praxis uses the term 'risk' to refer to unknown variables, general uncertainty and the general principle of risk.

- an unknown variable for which assumptions need to be made (for example number of users, inflation) which should be understood, articulated in the business case and, where possible, quantified using cost-benefit analysis

The circumstances under which work will no longer be viable or solution relevant should be determined, using techniques, such as simulation, contingent scenarios and sensitivity analysis.

It then uses the term 'risk event' to refer to a specific occurrence and its consequences.

Different risk techniques apply to different types of risk. For instance, Monte Carlo applies to general estimating uncertainty, while probability/impact analysis applies to risk events. Sensitivity analysis can apply to both.

Risks and issues which an owner cannot resolve should be escalated or reassigned as necessary. The work component hierarchy (see Figure 2) can be used as a basis for escalating or reassigning risks. Risk owners might be outside the formal hierarchy but should be responsible to a person in the work component's management structure.

Praxis defines an issue as something that needs to be escalated. If problems arise within agreed tolerances they are treated as a normal component of cybernetic control as applied by the delivery process.

Note; guidance on risk management can be found in the Orange Book [6] and management of risk in government [7].

These are specific to government and outside the scope of Praxis.

7.2.5. Change control

Change control ensures only beneficial or necessary changes to the baseline are implemented. Changes might originate from any stakeholder, including policy makers, executive management, end users, suppliers or team members. Alternatively, a change might result from a risk or issue which cannot be resolved. Criteria should be defined to:

- define what aspects of the work should be change controlled
- direct which individuals or groups have the authority to approve changes (see section 4.3)

Change control is covered by the topic of the same name.

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.

The change control procedure is most commonly triggered by a request to change scope. However, the same procedure is used to manage change requests that relate to any other aspect of the baseline plans (such as budget or timescale changes).

Change requests should be recorded, identified and defined. The impact of a change should be assessed in terms of impact on the business case, objectives, benefits, scope, resources, time, cost, quality and risk. An implementation plan should be developed, prior to receiving approval to implement the change. The decision should be communicated to all interested parties. Once the change has been incorporated into the baselined plan and

Change requests are recorded in the change log and managed through the change control procedure.

affected information updated, the change request should be closed.

Changes to systems/groups of interrelated deliverables (products) should be controlled through configuration management.

See 7.2.6

7.2.6. Configuration management

Configuration management is the term used to describe the management of a group of products or items that work together to deliver a solution, service or system, whether produced internally or by a supplier.

Configuration management is used to ensure the components of a solution work together, are identified in terms of status and version and that the composition of higher level groupings of those deliverables are compatible and known at all times. Configuration management should include:

- planning the scope of and managing configuration, including configuration baseline control
- configuration status accounting and reporting to ensure those requiring this information are informed
- verifying the accuracy of the configuration records (configuration audit)

Note: the deliverables placed under configuration management include those produced by suppliers and internally, and tools used during the design, development or manufacturing of a solution.

Note: this practice is essential in most engineering or technical solutions, but can be applied to non-technical elements such as processes, operating manuals and instructions. Different sectors might have different names, such as parts or asset management.

Configuration management is covered by the topic of the same name. 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.

7.2.7. Information management

Information management ensures all necessary information (physical or electronic) is available and reliable for undertaking work and making decisions.

The information which needs to be managed should be defined. This might include information relating to the solution and its development, plans, progress assessments, reviews and audits, contracts, reports and

This area is covered by the information management topic, the goals of which 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.

communications. Information should be recorded on receipt, validated as correct, securely stored, distributed and retrievable by those who need it. Business continuity measures should be in place in the event of a disruptive incident.

New information sets, such as documents, should be reviewed, approved, version controlled and, when no longer required, withdrawn and archived. The status, security classification and provenance of information should be clear. Information should be retained to meet statutory and contractual requirements. Configuration management might be required to ensure the integrity of groups of related information. (see 7.2.6)

GovS, Security shall be complied with.

Note: information management can include web content management, document management, records management, digital asset management, learning management and content systems.

Note: for advice on information handling see [8 – 10]

7.3. Quality

Quality support practices determine the degree to which the features and inherent or assigned characteristics of an output or solution (whether product, person, process, service and/or system) meet expectations or stated needs, requirements and specification.

Quality shall be actively managed to maximise the likelihood of success. The methodology or process for undertaking work should be defined and appropriate to the outputs. People should be trained, briefed and competent to undertake the work assigned to them.

Note as well as the AXELOS best practice guides, standards and bodies of knowledge, guidance on requirements, design, verification and validation can be found in CMMI-DEV [40] and ISO 15288 [35].

The Praxis Framework takes the same approach to quality in project management as ISO10006. It maintains that quality is not a separate subject but something that is inherent in all aspects of project management.

This article explains more about the approach.

In Praxis, quality planning is addressed in the planning topic, quality control in the control topic and quality assurance in the assurance topic.

7.3.1. Quality management

Quality management ensures outputs are fit for purpose to achieve the objectives. The management framework should include:

Quality planning is included in planning, quality control in control and quality assurance in assurance.

- quality assurance to provide confidence that outputs will match their defined quality criteria
- quality control to monitor specific results to determine compliance with the specified designs and identify ways to eliminate causes of unsatisfactory performance

Note: the quality of the solution is dependent on the choice of appropriate design and development methodologies. Different approaches are appropriate in different circumstances, for example an iterative, agile delivery approach for digital service [11]

7.3.2. User needs and requirements

Managing requirements ensures the needs of stakeholders are understood and considered throughout the development of the solution.

Requirements should be refined, elaborated (for example, as agile epics and user stories) and evolve with the design until a solution is defined and viable product agreed. Multiple iterations might be needed to fully understand the requirements.

A common understanding of the outcomes for all phases of the solution's life cycle (including development, in-life and disposal) should be agreed between those requesting the work and those undertaking the work. This should include any relevant statutory, regulatory or other constraints. The requirements should be determined for those affected by the development and use of the outputs and subsequent outcomes, such as the public, end users, operational and maintenance staff, developers, constructors and manufacturers. Requirements should be uniquely identifiable, current, mutually consistent, understandable, unambiguous, prioritised and validated. There should be two-way traceability between the requirements and the elements of the design. Changes to requirements should be controlled; changes should be aligned to the vision and goals of the work component.

Note: traceability can be recorded using configuration management.

7.3.3 Solution design

Design ensures the outputs meet the requirements and will achieve the desired

The requirements management topic addresses all aspects of the subject. 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.

Solution design is covered as part of the solutions development topic.

outcomes and benefits and represents value for money. Design might be sequential, incremental, iterative or agile.

Solution design might evolve as requirements are elaborated and design progresses. The solution design (or blueprint) should include all outputs needed to achieve the desired outcomes, including, but not limited to, people, software, equipment, operations and maintenance products, manufacturing, security, information, organisation design, supply chain, performance characteristics and desired behaviours. The solution should be defined sufficiently to enable its parts to be verified as correct. There should be two way traceability between the design elements and the plan.

The design team should consider a range of solutions (design approaches, design concepts, or preliminary designs) that potentially satisfy the requirements and recommend a solution to be implemented.

The entire solution should be considered with progressive decomposition into its constituent elements, including those undertaken and implemented by suppliers. Interactions between elements and the operating environment should be known and taken into account.

7.3.4. Solution development and integration

Solution development and integration ensures that the solution is built in a defined way such that all elements comprising the solution work together within the operating environment.

Working methods and processes should be defined together with how different elements of the designed solution are integrated and work as a whole. A strategy should be developed defining the approach to be taken for sequencing, delivery and integration of the elements of the solution, including any special environments or facilities required.

Solutions development is covered by the topic of the same name. Its goals are to:

- evaluate baseline requirements and alternative solutions to achieve them;
- select the optimum solution;
- create a specification for the solution.

7.3.5. Verification against design and validation against need

Verification checks the correctness of a solution (or part of a solution) to confirm that it matches the specified design. It should be aimed at detecting faults or failures.

Validation ensures the right problem is being addressed and the solution is likely to meet the requirements when operating in its intended environment. Validation should be applied to the solution or a significant part of it and should be aimed at demonstrating stakeholder satisfaction.

Verification and validation should be continuous throughout the life cycle and may be iterative in nature with solution, design and requirements evolving as work progresses. The methods used for specialist work should include appropriate approaches and planned activities for both verification and validation.

Note; methodologies for verification and validation might include, but are not limited to: prototyping, simulation, inspection, show and tell, analysis, demonstration, test, trials or pilots and sampling.

In Praxis, verification and validation are part of solutions development and configuration management.

7.3.6. Learning from experience

Learning from experience avoids repeating the same mistakes and helps spread improved practices to benefit current and future work.

At the start of the work, those involved and key stakeholders should identify and apply relevant lessons from previous experience when planning the work. Throughout the life cycle, lessons should be continually captured, evaluated and action should be taken to mitigate delivery risk and facilitate continual improvement of the final outputs and services. Organisation leaders, (including arm's length bodies) and owners of standards, processes, methods, guidance, tools and training, should update their knowledge sources and communicate learning as appropriate.

Experiences should be captured in a lessons log throughout a project, programme.

As part of the review activity in the closure process, the lessons recorded in the log are reviewed and recommendations made for future improvement.

As part of knowledge management (typically facilitated by the portfolio) the lessons and recommendations should be available in a knowledge base which is then used when previous lessons are reviewed in the identification process.

7.3.7 Programme and project specific team induction and training

Induction and training ensures team members are working effectively as soon as practical through being briefed on the context of the

The principles of learning and development are covered in the topic of the same name.

programme or project and its operational procedures. Induction should include, but not be limited to, ensuring the necessary facilities are made available, a briefing on the work, the role being undertaken, necessary processes to be followed and training required and granting appropriate security access. Training should include, but not limited to, defining a training strategy, analysing training needs, defining, developing and maintaining briefings/courses, planning, delivering and monitoring training events.	While courses and certification in Praxis Framework are available we hope to take learning and development several steps further. The capability maturity assessment tool doubles up as a system of checklists that help embed good project management practices and create the right habits. The resource pages form a growing library of material that promotes continuing professional development – all classified according to the structure of the framework so that CPD can be directly relevant to what the reader is doing on their project at any time.
7.4. Commercial and financial Commercial and financial support practices ensure the government's policies on commercial and financial management shall be complied with and managers should be provided the necessary information to undertake their roles.	This is outside the scope of Praxis
7.4.1. Finance Financial management ensures the efficient and effective management of money (funds) to accomplish the objectives of the organisation. The level of funding needed should be determined, in the short and long term for the portfolio, programme or project including any subsequent in-life or running costs. Sources of funding should be secured. The management framework should be defined, including, financial accountabilities, levels of delegation, approvals and monitoring. Financial reports should be reliable and provided to decision makers and to managers of work components in a timely manner. Gov S006, Finance should be complied with.	The financial management topic in Praxis has three components: Investment appraisal: assessing the financial viability of a project or programme Funding: selecting the right way to fund a project or programme and then managing that funding Budgeting and cost control: the day to day management of the project or programme finances. How financial management will be conducted is set out in the finance management plan. This is outside the scope of Praxis

7.4.2 Sourcing

Sourcing ensures products or services bought as part of resourcing the work or developing the outputs are of the appropriate quality, represent value for money and can be delivered within an acceptable level of risk.

Appropriate contract strategy and procurement packages should be determined, suppliers selected against defined criteria and the contracts formally agreed. Contracts should be designed to reflect the type and method of delivery and reliability of the supply chain. The scope of contracts should include all necessary documentation and tools required for the operation of the service or product.

GovS 008, Commercial, relating to sourcing should be complied with.

Procurement is a component of resource management. Its goals are to:

- identify potential external suppliers;
- select external suppliers;
- obtain commitment to provision of internal resources.

How procurement will be conducted is set out in the resource management plan.

This is outside the scope of Praxis.

7.4.3 Contract management

Contract management ensures any products or services bought as part of resourcing the work or developing the outputs are of the required quality and delivered when needed.

The management team should comply with the contractual obligations (as customer), including payments to suppliers. Supplier performance and quality should be monitored and accepted after verification against the contractual requirements.

GovS 008, Commercial, relating to contract management should be complied with.

Contract management is a component of resource management. Its goals are to:

- support procurement by negotiating terms and conditions;
- document contractual agreements;
- monitor contractual performance;
- conclude contracts.

How contract management will be conducted is set out in the resource management plan.

This is outside the scope of Praxis.

A. References

The project delivery standard references a number of specific UK Government resources.

The Praxis website provides resource pages for most functions and processes in the framework. Resources related to the PDS references are listed below.

These include articles, templates and links to free resources from around the web.

1	HM Treasury (2015), Managing Public Money	
2	Cabinet Office (2017), Cabinet Office controls. *Note: the guidance on spending controls helps government departments to reduce wasteful expenditure and help reduce the fiscal deficit.*	Click here for the range of spending controls
3	Infrastructure and Projects Authority, Assurance Tool Kit. *Note: a set of guidance covers the integrated assurance toolkit for Gateway reviews (1 to 5), integrated approval and assurance plans, risk potential.*	Download the toolkit here
4	Cabinet Office, SRO briefing note: relevant documentation. *Note: a set of guidance for SROs for when projects are going through assurance reviews for the Infrastructure and Projects Authority.*	Access SRO (sponsor) guidance here
5	HM Treasury (2016),The Green Book: Appraisal and Evaluation in Central Government. *Note: HM Treasury guidance for public sector bodies on how to appraise proposals before committing funds to a policy, programme or project.*	Download the Green Book and supplementary guidance here
6	HM Treasury (2013) The Orange Book Management of Risk - Principles and Concepts	Download the Orange Book here
7	Cabinet Office (2017), Management of Risk in Government: framework	Download guidance here
8	HMG Information Assurance Standards	
9	Cabinet Office, National Security and Intelligence, and Government Security Profession (2014), Security Policy Framework	Click here to download
10	A guide to Information Assurance and Data Handling	Access guidance here
11	Government Digital Service Standards. *Note: a set of information comprising the Digital Service Standard, Service Manual (Guidance on how to research, design and build services that meet the Digital Service Standard) and Technology Code of Practice (The standard you need to meet to get approval to spend money on technology or a service)*	Learn more here
12	Cabinet Office (2011) A guide to implementing integrated assurance and approvals	Download the guide here

13	Cabinet Office (2017), Project Delivery Capability Framework	Download the capability framework here.
14	HM Treasury (2016), Treasury Approvals Process for Programmes and Projects *Note: HM Treasury guidance for the Treasury Approval Point (TAP) process and arrangements for the scrutiny and approval of major project and programme spending outside Delegated Authority Limits (DAL) set by the Treasury.*	Download the approvals process here
15	Transparency policy on the Government's Major Projects Portfolio (GMPP) and guidance for departments on exemptions	Download the guidance here
16	HM Treasury (2012), Assurance Frameworks	Download the guidance here
17	HM Treasury (2017), Accounting Officer System Statements	Download the statements here
18	HM Treasury (2017), Making an Accounting Officer Assessment	Download the document here
19	not used	
20	not used	
AXELOS Best Practice publications – see footnote 2		
21	Managing Successful Projects with PRINCE2; Sixth edition:2017	
22	Directing Successful Projects with PRINCE2; First edition:	The Praxis Framework brings projects, programmes and portfolios together in a single framework with a single taxonomy and consistent terminology.
23	Managing Successful Programmes (MSP®); Fourth edition:20111	
24	Management of Portfolios; First edition:2011	
25	Management of Risk; Third edition:2010	Risk management, risk techniques and risk context
26	Portfolio, Programme and Project Offices; Second edition:2014	
27	Portfolio, Programme, and Project Management Maturity Model (P3M3)	The Capability Maturity model within the Praxis Framework is closely modelled on CMMI-Dev
28	PRINCE2 Agile; First edition:2015	
British and international standards – see footnote 2		
29	BS6079 Part 1:2010 Principles and guidelines for the management of projects	
30	BS6079 Part 2:2000 Project management Part 2: Vocabulary	
31	BS ISO 21500:2012 Guidance on project management	The Praxis Framework brings projects, programmes and portfolios together in a single framework with a single taxonomy and consistent terminology.
32	ISO 21503:2017 Guidance on programme management	
33	BS ISO 21504:2015 Project, programme and portfolio management — Guidance on portfolio management	
34	ISO 21505:2017 Project, programme and portfolio management — Guidance on governance	
35	BS ISO/IEC/IEEE 15288:2015 Systems and software engineering — System life cycle processes	

Professional organisations – see footnote 3

36 APM Body of Knowledge, 6th edition (covers portfolio, programme and project management)

37 A Guide to the Project Management Body of Knowledge, 5th edition, PMI, 2013

38 The Standard for Programme Management — Third Edition, PMI, 2013

39 The Standard for Portfolio Management — Third Edition, PMI, 2013

40 CMMI® for Development, Version 1.3, SEI.

The knowledge section of the Praxis Framework is very closely aligned with the 6th Edition of the APM Body of Knowledge

The principles of the PMI guides are embodied within Praxis albeit with different taxonomy and terminology. The Praxis Comparative Glossary can be used to translate between guides

The Capability Maturity model within the Praxis Framework is closely modelled on CMMI-Dev

Note 1: AXELOS is a company part owned by the UK government which took on the management of the best practice guides from the former Office of Government Commerce within the Cabinet Office. The guides are available by subscription or individual purchase. These guides comprise the recommended methods for government project delivery.

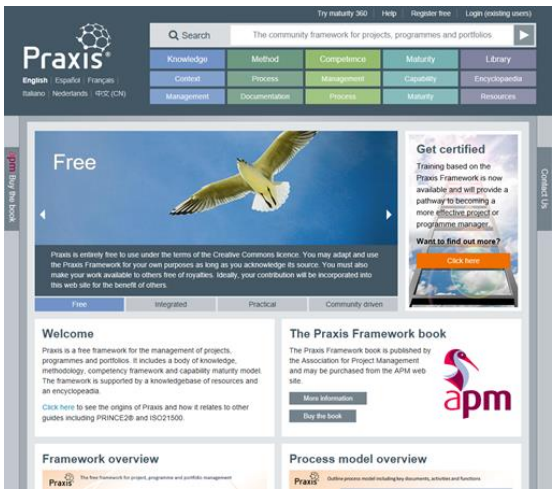
Note 2: British and international standards contain supplementary information and are available.

Note 3: The Association for Project Management (APM) is the UK's chartered professional organisation. The Project Management Institute (PMI) is based in the USA and has chapters in the UK. Their references are free online to members or by individual purchase. The Software Engineering Institute is a federally funded research and development centre sponsored by the US Department of Defense. Its CMMI materials are free to download.

The Praxis Framework is a UK based initiative that provides guidance equivalent to the combined coverage of PRINCE2, Managing Successful Programmes, Management of Portfolios, the APM Body of Knowledge, the National Occupational Standards and the CMMI Capability Maturity Model.

The scope of all of the above are combined into a single framework with a single taxonomy and common terminology.

The entire framework is free and on-line at www.praxisframework.org.



B. Glossary

The project delivery standard contains definitions for terms used within the standard.

The Praxis comparative glossary describes over 1,300 common terms in project, programme and portfolio management.

It includes terminology from all the main guides with comparisons and equivalences.

The glossary can be viewed on-line or downloaded as a pdf here.

C. Example roles and responsibilities

Praxis does not currently define roles and responsibilities beyond the references to generic roles within the knowledge and method section.

The links below are to the main functions and processes in the Praxis Framework that are relevant to the roles as defined by the standard.

Portfolio director

The portfolio director is accountable to a defined higher authority for the direction and governance of the portfolio, ensuring the realisation of the required benefits at an acceptable level of risk. He or she is accountable for owning the portfolio strategy and plan and should provide clear leadership and direction through its life and, in particular:

- gain relevant management board approval for the portfolio strategy and delivery plan
- promote a culture focussed on cross-organisation, collaborative working which acts in the interests of the organisation as a whole
- ensure the portfolio evolves to reflect changes in the socio-political environment, policy, strategic objectives, business priorities and emergent risks
- funds and resources are allocated where needed and capacity and capability are sufficient to meet the needs

The four processes (and their associated competences) that describe the management of a portfolio are the:

- Initiation process
- Governance process
- Management process
- Co-ordination process

The initiation process covers the creation of a portfolio, including securing the initial investment, while the governance process addresses keeping management practices consistent and up to date.

Balancing the portfolio to ensure funds and resources are allocated effectively is covered by the management process and day to day running of the portfolio is covered by the co-ordination process.

The portfolio director will be particularly focussed on the initiation and governance processes.

Functions (and their associated competencies) that are particularly relevant to this role definition include:

- ensure portfolio management practices are defined, maintained and kept up to date
- secure the investment to implement portfolio management and its support systems, tools and environment

Note: the role may be supplemented by or supported by a portfolio direction group or investment committee, which the portfolio director might chair. Individual aspects of the role might be assigned to different line managers.

Note: guidance on portfolio management can be found in Management of Portfolio [24].

Portfolio manager

The portfolio manager is accountable to the portfolio director for managing a portfolio as a whole, ensuring that its work components are sufficient to meet the objectives. Responsibilities include monitoring spend against budget, benefits realisation, business change and risk. The portfolio manager coordinates the effective and efficient operation of the portfolio management and ensures the flow of information to decision makers and, in particular:

- drafts the portfolio strategy and plan in support of the organisation's business plan
- identifies constraints to the portfolio's delivery plan
- prepares the regular portfolio reports for stakeholders and decision makers
- ensures work component business cases are created on a consistent and reliable basis across the portfolio, using the same assumptions
- ensures investment appraisals are undertaken
- ensures dependencies between components in the portfolio are identified and managed
- leads the development and roll-out for stakeholder management and communications
- keeps the portfolio management framework up to date, identifying and implementing improvements

- Sponsorship (since the portfolio director is effectively the portfolio sponsor)
- Benefits management
- Change management
- Risk context

The four processes (and their associated competences) that describe the management of a portfolio are the:

- Initiation process
- Governance process
- Management process
- Co-ordination process

The initiation process covers the creation of a portfolio, including securing the initial investment, while the governance process addresses keeping management practices consistent and up to date.

Balancing the portfolio to ensure funds and resources are allocated effectively is covered by the management process and day to day running of the portfolio is covered by the co-ordination process.

The portfolio manager will be particularly focussed on the management and co-ordination processes.

Every function within the knowledge section of Praxis has a section titles 'projects, programmes and portfolios'. This section describes the evolving approach to each function as complexity increases, always ending with the application of the function in the portfolio environment.

Investment appraisal, stakeholder management and business case management are all discussed and competencies defined within the framework.

Note: the role may be supported by a portfolio progress group or delivery committee, which the portfolio manager may chair. Individual aspects of the role might be assigned to different line managers.

Note: guidance on portfolio management can be found in Management of Portfolios (MoP®) [24].

Senior responsible owner (SRO)

The senior responsible owner is ultimately accountable for ensuring a programme or project meets its objectives, delivers the projected outcomes and realises the required benefits. He/she is the owner of the business case and accountable for all aspects of governance. Responsibilities include, but are not limited to:

- defining and communicating the vision and business objectives in line with policy
- ensuring a real business need is being addressed
- assuring ongoing viability
- engaging key stakeholders
- providing the team with leadership, decisions and direction
- ensuring the delivered solution meets the needs of the business

It shall be clear who the senior responsible owner is accountable to.

Note: the role should be supported by a programme board which the SRO should chair.

Note: the SRO may appoint a project sponsor to act on their behalf with respect to a sub-programme, project or other work within a programme.

Note: for programmes or projects not in the GMPP, the SRO might be called a 'sponsor' or 'executive' and might be accountable to a defined sponsoring group instead of Parliament.

Note: guidance on the SRO role can be found in PRINCE2® and Managing Successful Programmes(MSP®) [22 and 23].

Praxis refers to the SRO as a sponsor. There are references throughout the framework to the sponsor.

Specific topics are:

- Sponsorship and the
- Sponsorship process

The vision articulates the high-level objectives of a project or programme. The desirability and viability of the objectives are expressed in the business case.

Engaging with stakeholders is the final step in the stakeholder management procedure and leadership is discussed in the topic of the same name.

All of the above have associated competency definitions.

Programme/project manager

The programme/project manager is accountable to the senior responsible owner for establishing the governance framework and

This is the role that manages the project life cycle through the application of the processes.

for the day-to-day management of a programme/project, to deliver the desired outcomes and products and realise the required benefits including, but not limited to:

- ensuring the solution (blueprint) is designed and preparing the business case and plans
- defining the approach, accountabilities, work scope and targets for the team
- monitoring, forecasting and reporting overall progress against the plan
- resolving risks and issues and controlling change
- delivering the required outputs and outcomes
- monitoring and managing supplier performance
- engaging and communicating with stakeholders

Note: guidance on the programme/project manager role can be found in PRINCE2® and Managing Successful Programmes [21 and 23].

Programme/project support office manager

The management team should be supported in the effective and efficient undertaking of their roles. Support might be provided by single or multiple physical or virtual structures, i.e. offices (permanent and/or temporary), which might be centralised or distributed. Services provided might include value-added delivery support as well as administrative functions such as:

- providing support to the management practices in sections 4, 5 and 6 of this standard
- providing specialist services on the support practices in section 7 of this standard
- undertaking independent reviews and audits
- developing, procuring, selecting and managing management support tools and systems
- consolidating and analysing reporting
- monitoring resource usage across the organisation

Every project and programme process and function applies to this role.

A blueprint is a document that typically describes an organisation after change management has been completed to achieve the required benefits.

Monitoring, forecasting and reporting are activities within the delivery process.

Resolving risk is explained in risk management and issue management is part of the delivery process.

Supplier performance is part of resource management and engaging with stakeholders is covered by stakeholder management.

All of the above have associated competency definitions.

Project and programme offices come in many forms. Some are focused on support (typically called a PSO), while others have a broader governance role (typically called a PMO).

The competencies required to be a project and programme office manager will be dependent upon the scope and constitution of the support/governance organisation.

- providing consulting and coaching and advising sponsors and managers
- maintaining standards for recruitment and development of project management staff
- providing training and assessment.

Note: often referred to as a programme management office or PMO.

Note: guidance on designing and operating support services can be found in Portfolio, Programme and Project Offices [26].

Manager of a work package/team manager

The manager of a work package is accountable to the project manager (or higher-level team manager) for those products and outcomes allocated to them (as defined in a work package) to an appropriate quality, timescale and at an acceptable cost. This includes, but is not limited to:

- ensuring work packages are completed to the required quality, on time and to budget
- contributing to and review significant management documentation
- planning, monitoring, forecasting and reporting overall progress against the plan
- managing the resolution of risks and issues, escalating any they cannot deal with
- controlling changes to their work scope, highlighting any requiring approval

Note: guidance on the team manager role can be found in PRINCE2® [21].

This role will focus on the management of the development process using the functions and competencies defined in the management section of the Praxis Framework.

Key functions for this role include: scope management, planning, control, risk management and financial management.

D. Example project lifecycle

This diagram shows an example lifecycle for a government major project, with the stages, assurance reviews, gates and business cases indicated at the appropriate points. The project lifecycle should be tailored to suit the particular circumstances.

While project and programme life cycles should be tailored to specific contexts, they all follow the same fundamental principles of progressive definition and go/no gates.

In some cases, the fundamental phases are merged or (as in the case of the life cycle below) they are subdivided to provide more go/no go control points.

The way that many well-known life cycles follow the same principles despite superficial differences is explained in this article.

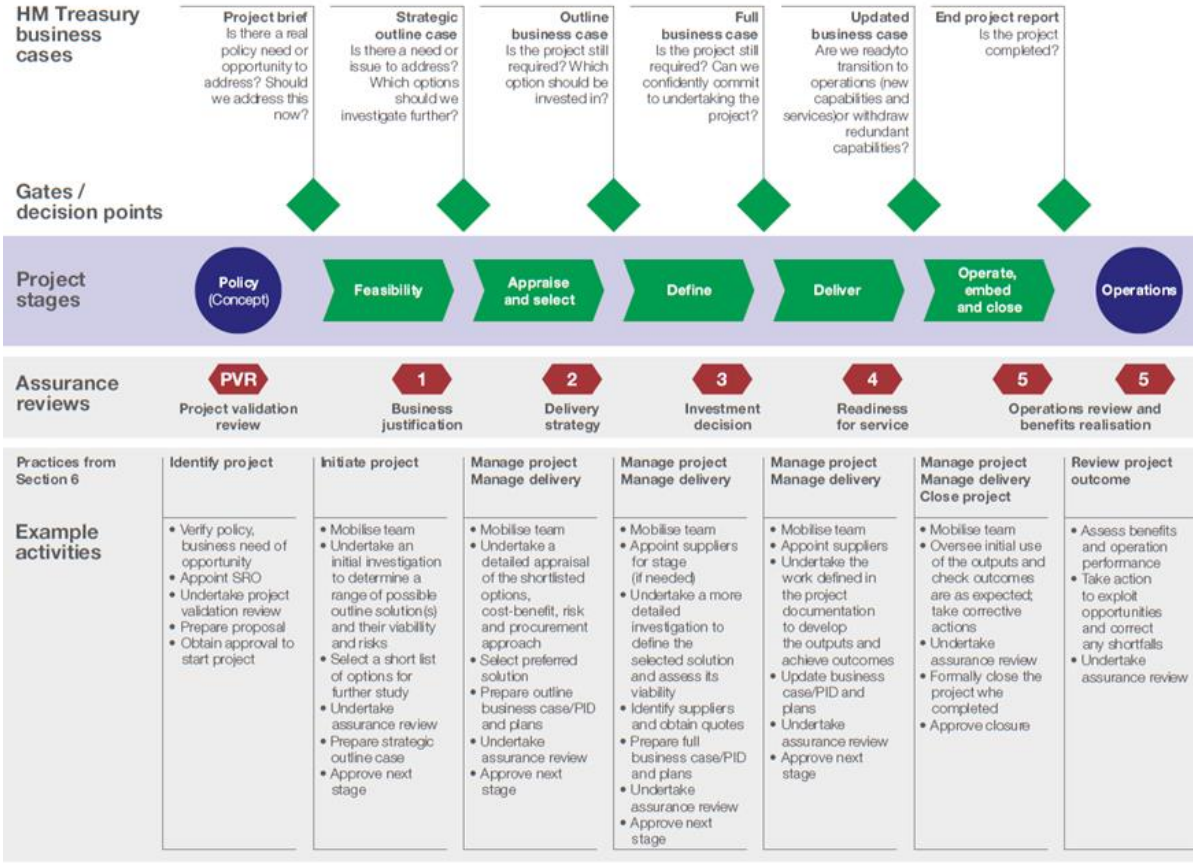


Figure D1

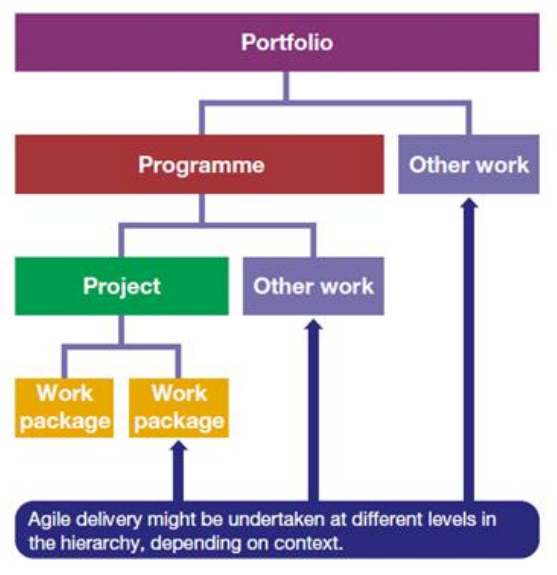
Figure D1 is an 'example' project life cycle and various life cycles may be used depending upon the context of the work. The comparisons below show how the phases in this example life cycle relate to the generic management processes in the Praxis Framework.

Project stages	Practices from section 6	Praxis processes
Policy (concept)	Identify project	Identification process
Feasibility	Initiate project	
Appraise and select	Manage project & manage delivery	Definition process
Define	Manage project & manage delivery	
Deliver	Manage project & manage delivery	Delivery process Boundaries process Development process
Operate, embed and close	Manage project, manage delivery & close project	Benefits realisation process Closure process
	Review project outcome	

E. Agile delivery and this standard

This Project Delivery Standard defines a number of practices needed for successful outcomes. It defines the why and the what for each but does not define how work is to be undertaken.

Agile is an umbrella term for a range of methodologies and advocates agile behaviours together with how to undertake the work. Agile delivery is required when developing government digital services but is applicable in other situations, not only software development, where the approach originated.



The context in which agile delivery is used is important as it influences governance. Agile delivery might be undertaken as a work package within a project (which might itself be part of a programme), or as part of live running in business as usual within a programme or portfolio. This is why this standard has "other work" defined as a work component; not everything needs to be managed as a project. The governance for the agile work, its interface with other work and how it is to be carried out, should be defined and covered under a business case when it is part of a programme or project; work undertaken using agile delivery still has to be justified and funded. Appropriate assurance, reporting systems, governance should be established. Roles need to be defined, with the senior responsible owner still

As with the delivery standard, there is nothing within the Praxis Framework that cannot be applied using in an agile manner (or the 'agile mindset' as some refer to it).

Specific references on the Praxis web site that illustrate this are:

- Using Scrum with Praxis
- A comparison of the project life cycles from Praxis and the Agile Business Consortium's guidance.

ultimately accountable, but actual roles used for delivery will match agile roles, depending on the agile methodology used and the context in which it is done.

The project delivery standard requires a staged approach to projects but does not define what those stages should be. In a project where the work is predominantly agile, project stages of discovery, alpha, beta, live and retirement meet that requirement and align with section 6.3 and the lifecycle in Annex D.

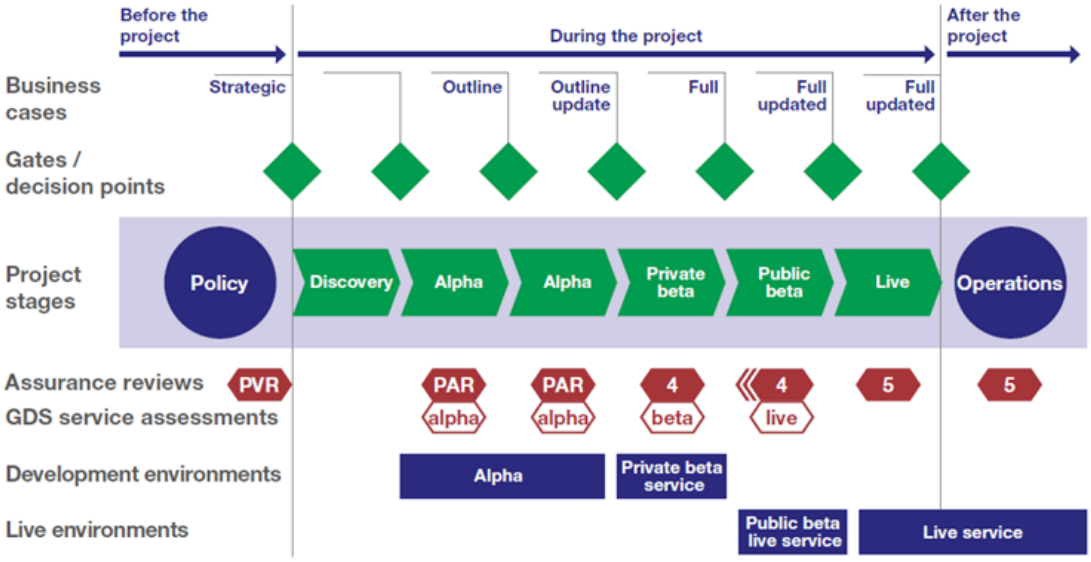


Figure E1 Example life cycle for a project which uses agile as the primary delivery methodology

Note: the number and types of business case, assurance reviews and project stages might differ from project to project to reflect the context, nature and complexity of the work.

Published by Praxis Framework Ltd.

www.praxisframework.org

info@praxisframework.org