

**PROCURE**

ICT projects technical guidance

Procure and deliver



The Secretary

Department of Treasury and Finance

1 Treasury Place

Melbourne Victoria 3002 Australia

Telephone: +61 3 9651 5111

Facsimile: +61 3 9651 5298 [www.dtf.vic.gov.au](http://www.dtf.vic.gov.au/)

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#### Investment Lifecycle Framework

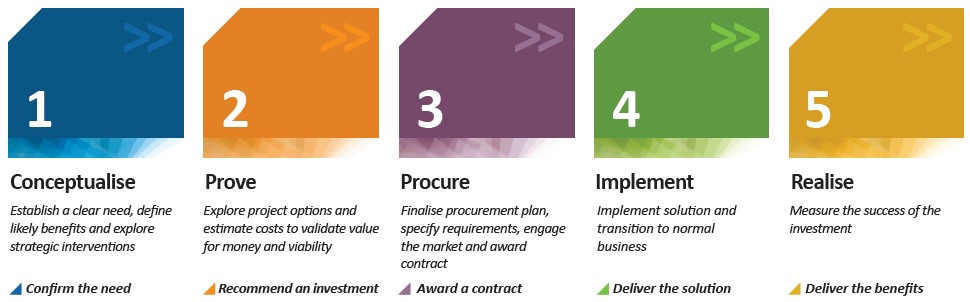
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4. Introduction

## Context

Information and communications technology (ICT) is critical for government to operate effectively. Many ICT projects are designed to enable a service transformation objective. They are inherently difficult to plan and deliver when compared to traditional asset or service delivery projects.

The investment lifecycle and high value high risk guidelines (lifecycle guidelines) provide agencies with practical assistance to shape investment proposals, inform decision making, monitor their delivery and track the benefits they achieve. This framework applies to all projects, including ICT projects. The stages of the investment lifecycle around which the Lifecycle Guidelines are structured are shown in Figure 1.



**Figure 1 The five stages of the investment lifecycle**

This guideline is a technical supplement to the Lifecycle Guidelines. It provides agencies with assistance in applying the guidelines to ICT projects in the procurement and delivery stages. The guidance incorporates advice on implementing leading practices in areas including staging project delivery, technology selection and business readiness, as they relate to the procurement and delivery phases of projects. It has been developed for use by:

* + - business and technology stakeholders;
    - project planning and delivery teams; and
    - officers from central agencies undertaking reviews and assessments of High Value/High Risk (HVHR) ICT projects.

## Leading practice in ICT

ICT-enabled projects have historically experienced significant cost overruns and time delays, generally on a greater scale and incidence than other types of projects. The November 2011 Victorian Ombudsman’s report into Victorian Government ICT-enabled projects and Sir Peter Gershon’s final report into the Australian Government’s use and management of ICT released in October 2008 both highlight the need to improve the delivery of ICT-enabled projects. Both the Ombudsman’s investigation and the Gershon Review presented a series of recommendations that significantly overlap with industry-established leading practice.

Extensive cost overruns and time delays in ICT-enabled projects have also been experienced by other public sector jurisdictions and in the private sector.

Existing frameworks and guidance provided by the Victorian Government for delivering large projects already encompass many leading practices. These frameworks include:

* + - Investment Management Standard;
    - HVHR framework (see section 1.3 below); and
    - quarterly major project reporting.

This supplementary guideline builds on the material listed above, providing advice for implementing government frameworks and setting out leading practices to improve the success of ICT project delivery.

## HVHR framework

The HVHR framework was endorsed by the Victorian Government in December 2010. It is designed to provide increased rigour in the planning and delivery of major infrastructure and ICT investment projects. Projects with the following profiles are categorised as HVHR:

* + - projects with a total estimated investment (TEI) greater than $100 million;
    - projects categorised as high risk by the Gateway project profile model; or
    - projects otherwise deemed by government to be high risk.
    - Some ICT projects may be deemed as HVHR based on the categorisation criteria listed above. Others may become HVHR projects during their lifecycle if significant difficulties are encountered during planning or implementation. Under the framework, HVHR projects are subject to the following requirements:
    - A preliminary business case must be provided to the asset project’s early filtering stage. (Note: Non-HVHR projects must submit a strategic assessment to early filtering.)
    - A Department of Treasury and Finance (DTF) assessment of the robustness of the business case must be undertaken and Treasurer’s approval sought prior to funding consideration by government.
    - After funding approval, Treasurer’s approval of the following will be required:
      * procurement documentation before it is released to the market, including expression of interest (EOI), request for tender/proposal (RFT or RFP);
      * procurement process decisions (preferred bid and appointment of successful contractor(s));
      * any major contract variations subsequent to the project commencing; and
      * Gateway reviews – red-flag escalation as part of the approval process.
    - HVHR projects are subject to mandatory Gateway reviews from Gate 1. In addition, where a Gateway review report includes a ‘red flag’ recommendation (i.e. recommendations requiring critical and urgent action), these must be escalated to the Treasurer with an appropriate action plan. In relation to business case and procurement-related reviews (Gates 1 to 4), an appropriate red-flag action plan will be required as a pre-condition for the Treasurer’s approvals noted above.

## Staged approach for ICT projects

**DTF expects that agencies will submit a business case articulating project stages aligned to key deliverables.** Under a staged delivery approach, each project stage is discretely scoped and costed based on the outcomes of previous stages. Although a full business case is developed, it is refreshed following each project stage, with progressively more refined and detailed cost estimates (including contingency) and benefits analysis. Approval to proceed is focused on the most immediate project stage, rather than the entirety of the project.

A staged delivery approach reinforces continual assurance processes and close monitoring and evaluation of progress at key project milestones. It allows greater opportunity to regularly refresh project cost estimates, which are often very difficult to predict at the early stages of an ICT-enabled project. The approach supports improved quality and timeliness of information around emerging risks and cost pressures throughout the lifecycle of a project.

Funding for each stage may be provided discretely and progressively based on a review of the full business case, progress to date and government priorities. This process occurs for each stage of the project until the project completes or a decision is made not to progress. It allows greater opportunity for agencies to refresh project cost estimates, which are often very difficult to predict at the early stages of an ICT-enabled project. Government will also have access to improved quality and timeliness of information around emerging risks and cost pressures. The process that agencies should undertake is depicted in Figure 2.

**Figure 2 Staged delivery process**

|  |  |
| --- | --- |
| 1. Prepare the preliminary business case | |
|  |  |

2. Submit preliminary business case for approval

Not approved

1. End

Approved

* 1. Prepare the full business case

Funding not approved

All stages delivered

* 1. Prepare additional detail for next project stage
  2. Submit funding application

Staging

|  |  |
| --- | --- |
|  | |
|  | 7. Update the full business case |
|  |

Funding approved

* 1. Receive funding and deliver stage

Stages not all delivered

# ICT project procurement

## Introduction

The procurement process starts from the first engagement with a vendor(s) through to the project’s completion. There are practical implications of applying a staged project delivery approach that will affect contracts with vendors. As part of the business case for an ICT project, a detailed procurement strategy should be developed to provide a framework for negotiating contracts with vendors to support the individual project stages. Departments will need to ensure that contracts reflecting a staged delivery approach are also structured to comply with purchasing policy.

The Lifecycle Guideline *Stage 3: Procure* provides detail on the requirements of projects during procurement and should be read as a prerequisite to this technical guidance. In addition, projects must adhere to established government procurement policies, processes and standards, including the HVHR process that is set out in section 1.3. The following sections provide more detail on considerations and leading practice that should be taken into account when conducting procurement activities for an ICT project.

## Scope and requirements definition

Project scope and requirements must be clearly defined leading up to and during the procurement process to form the basis of approaches to market. The following sections outline scope and requirements definition activities and documentation that must be undertaken as part of scope management during the procurement of an ICT project.

### Statement of work

An approved and funded business case establishes and confirms the key parameters of the statement of work. Under a staged delivery approach, it may be appropriate to develop this into a separate scope of work for each stage of a project. Alternatively a single scope of work may be used, but it must clearly define those scope items that align with each approved project stage.

The agreed scope of work is a key document for the Request for Tender (RFT) or Request for Quote (RFQ) for projects where external vendors are required. By the time the business case has been developed, sufficient investigation of requirements and solution options should have been undertaken. This will enable the definition and documentation of requirements to feed into the procurement process for the first stage and provide, at a minimum, an indication of direction for later stages.

To maintain focus on outcomes and project performance, the scope of a project can be articulated for the purposes of engaging vendors either as detailed requirements in the form of:

* + - * A performance work statement (PWS) that sets out the work items required and the outcomes expected; or
      * a statement of objective, where the vendor subsequently provides the detailed project method and task details for inclusion in a PWS.

### High-level design

Under a staged delivery approach, the high-level design may become an input to the procurement process for the next stage (see section 3.3.1).

### Detailed design

Under a staged delivery approach, the detailed design may become an input to the procurement process for the next stage (see section 3.3.1).

## Active contract management

Active contract management is critical to the success of ICT projects. Any discussion in relation to the project must be conducted through the lens of the contract.

The procurement strategy should provide information on the active contract management tools that should be negotiated. During the procurement process, and while competitive tension is high, all the tools needed to manage the project and deliver its business requirements should be negotiated. Once executed, the contract with the vendor becomes the key management tool to support the successful delivery of the project. Critical vendor management activities that must be managed via contractually agreed processes include contract variations, performance management, and fees and payments.

The following sections provide further detail on the tools that should be negotiated into the contract to manage these activities in the context of a staged ICT project.

### Contract variations

An appropriate contract will describe the core scope of services to be delivered, and how changes to scope and schedule must be made. Both parties must be diligent in agreeing formally to all changes to scope and schedule, and understanding any associated impacts. There should be strong governance and signoff procedures to support any changes to scope and schedule, including change requests that may be generated by business units, as well as established processes to obtain additional funding where required. Any changes to project scope and schedule need to take into account the impact on project benefits and must be worked back into the project business case for consideration during the next project approval stage.

There must also be strict and transparent controls over the proposed use of project contingency (which should not be used to support scope changes). Under a staged approach for delivering ICT projects, the need to maintain a significant project contingency is likely to reduce over the course of the project, as costs and the schedule are repeatedly refined.

### Performance management

The contract must provide processes aimed at performance management for both the vendor and the client. Agencies should be familiar with and use appropriate contract mechanisms, including escalation processes, to ensure the vendor meets the contracted requirements.

The type of performance management processes that may be built into vendor contracts for complex staged ICT projects include:

* + - * payment for deliverables on agreed milestone dates;
      * withholding a percentage of fees until agreed outcomes are achieved;
      * agreed acceptance criteria for major deliverables;
      * agreed stage-gate or milestone exit and entry criteria; and
      * regular independent reviews.

Care should be taken when determining the requirements and details of performance management milestones and review requirements. For example:

* + - * **Stagger delivery.** When designing reviews, the volume of documentation and other artefacts required for review should be considered in regard to resource availability of both the agency and the vendor. Where large volumes of artefacts must be reviewed, a plan to progressively deliver these artefacts or to split reviews is recommended.
      * **Spread milestones evenly.** Milestone reviews should be designed to avoid a small number of review points encompassing the majority of the project deliverables, resulting in an unmanageably large review burden. This also increases the risk of large issues being discovered later in the project that detract from confidence in the vendor, results in delays to the project and may require contract variations to fix.
      * **Manage workloads of experts.** Where subject matter experts are required to review large numbers of artefacts, their schedule and workload should be managed carefully to prevent delays.
      * **Set clear timelines.** All performance management processes should have very clear timelines and dates attached to ensure the process is completed in a timely manner. These timelines should apply to both agency and vendor activities and should include timelines for providing and assessing revised artefacts where first submissions did not meet requirements.
      * **Cross-reference deliverables to the contract.** It should be specified in the contract that vendors must provide a clear cross-reference of all project submissions to the clauses in the contract for which they apply. This must include all project submissions at all review points including technical and project documentation as well as legal submissions such as insurance certificates and notices of completion.

Performance management processes that specify part payment for partial completion of deliverables, or withholding of a percentage of fees until agreed outcomes are achieved, should be managed carefully, with consideration of the vendor’s cash flow requirements.

While these processes are important to ensure contracted outcomes are achieved, there should be very clear specification in the contract for how the vendor can work to achieve the balance of payments withheld and timelines around this. Milestones should occur with sufficient regularity to support the vendor’s reasonable cash flow requirements and work to support vendors in achieving these milestones to allow for payments to be made.

### Fees and payments

Payment schedules must be linked to key project milestones, performance criteria and deliverables. Key milestones should be linked to agreed stages and information required to support the application for funding for the next stage.

For example, a key milestone may be the completion of a design that is signed off by stakeholders or delivery of a component of the solution that passes defined user acceptance testing with less than the agreed number of defects at various severity levels.

Agencies must be familiar with liquidated damages, delay costs, exit costs and similar aspects of the contract that may trigger fee reductions or payments to the vendor. Unexpected costs can quickly accumulate if the project faces difficulties or is delayed due to designated responsibilities not being fulfilled. Contracts should be written to allow for sufficient time to:

* + - * conduct reviews required to assess whether milestones have been achieved; and
      * apply for funding for the next stage of project delivery without the threat of damages.

Where a decision is made to cancel a project, contracts should support agencies exiting from vendor contracts without large exit costs or damages.

## Competitive Dialogue

The ‘Competitive Dialogue’ model involves the contracting agency and short-listed vendors working together in a structured way to develop and refine the proposed solution for the project requirements.

Competitive Dialogue is most relevant for complex projects where the agency specifies an outcome-based requirement, but either cannot or does not want to prescribe the solution. Project complexity may arise, among other things, from the use of complex ICT infrastructure, introducing new technology for business transformation, or seeking an alternative service model. Variants of the Competitive Dialogue model exist and some variants are known as ‘Interactive Vendor Engagement’, ‘Joint Design’ and ‘Early Contractor Involvement’.

Key benefits associated with Competitive Dialogue, when conducted properly, include:

* increased potential for innovative solutions which are fit-for-purpose;
* greater confidence in the quality of the solution through increased interaction between the agency and the vendor during procurement;
* reduced transition risks as vendors have been involved with the agency in solution development;
* greater opportunities for the agency to balance service scope, quality and budget imperatives; and
* improved focus for the short-listed vendors to refine and agree to the solution approach under competitive pressure.

### Typical structure of Competitive Dialogue

A Competitive Dialogue is typically implemented in three phases:

* + - * pre-qualification phase
      * dialogue phase; and
      * offer/award phase.

The pre-qualification phase is typically conducted by issuing an expression of interest. It involves the selection of vendors that are allowed to participate in the dialogue process.

The dialogue phase involves structured exchange of information and collaborative work, in a competitive environment, between the agency and the short-listed vendors to refine and optimise the proposed design. The dialogue phase could be repeated a number of times with each repetition leading to further short-listing of vendors participating in the dialogue. In projects involving ICT infrastructure or services, a key consideration in this phase is finding the right balance between making changes to the business processes and the extent of solution customisation.

The offer/award phase takes place once the dialogue has completed, and the vendors remaining at the end of the dialogue have put forward a final tender incorporating their proposed solution.

### Key considerations in undertaking Competitive Dialogue

Competitive Dialogue can be a complex process requiring considerable skills, experience, resources and detailed planning. The outcome of the solution is highly dependent on the quality of the dialogue between the agency and the short-listed vendors. The following are some of the key issues that require careful consideration:

* + - * Competitive dialogue is most relevant for those services / requirements which are specified on an outcomes basis, including initiatives requiring service model redesign.
      * There can be a high cost of participation in the procurement process for both the agency and the vendors due to the iterative process involved. Small and medium size vendors may find it difficult to participate. To ensure a competitive environment, the agency needs to consider cost reimbursement to vendors participating in the dialogue.
      * The agency needs to be well prepared in terms of skills, market testing and assessment of service needs prior to undertaking Competitive Dialogue. The agency should be clear about its information needs during the process and only seek information directly relevant to meeting the objective of relevant phase of the process. Unstructured and excessive information requests can lead to cost overrun and schedule delays.
      * Significant demand is placed on the agency in the technical, commercial and legal disciplines when conducting the dialogue. The contracting agency should not rely on vendors to provide key skills which are more appropriately sourced in-house.
      * The agency needs to have a clear understanding of its evaluation criteria to short-list vendors during the different phases of the Competitive Dialogue. In particular, the agency must have clear criteria for exiting the dialogue phase.
      * The agency may be tempted to ‘cherry pick’ components of different proposed solutions but needs to carefully assess the integration costs of such an approach. Further, some vendors may be reluctant to share relevant information due to intellectual property concerns.
      * There can be an increase to the risk factors associated with probity, skills gap and inadequate planning that could lead to cost and schedule overruns.
      * Agencies should pursue Competitive Dialogue as a procurement strategy on an exception basis and should not use it as an alternative to proper pre-procurement scoping, engagement and consultation. Competitive dialogue is not considered to be an appropriate procurement methodology for commodity ICT services or infrastructure.

In pursuing Competitive Dialogue or its variants, agencies should be very clear as to why the traditional procurement methods are unsuitable, and how they need to resource and structure the dialogue to manage key risks and ensure expected outcome. Key areas of focus that should be explored in the strategy include:

* + - * the nature of the services proposed to be subject to the competitive dialogue;
      * the objectives sought from the process – in terms of budget, scope, quality of the services;
      * the capacity of the agency to undertake Competitive Dialogue and manage the associated risks;
      * the number (and skill set) of vendors invited to participate in the dialogue;
      * the minimum specification level / criteria to be imposed on vendors;
      * the number of phases involved in the dialogue and associated short-listing/selection criteria;
      * the composition of dialogue in terms of themes, information content, key outputs;
      * constraints on the nature and number of solutions; and
      * tender assessment and award criteria.

## Managing roles and responsibilities

Large, complex ICT projects create highly detailed and complex relationships between the vendor and the client. Each principal role has unique elements that require specialist skills and differing relationships. ICT projects should appoint appropriately skilled staff to the following key roles.

* *Delivery management.* This role is tasked with managing the delivery of the project, including managing the scope of work, the schedule, risk and issues registers, management of budget and costs and the scope change management process.
* *Commercial management.* This is a financial and legal task focused on managing agreed changes to the scope and schedule as well as resolving contractual disputes.
* *Vendor management.* This role manages the long-term relationship between the vendor and the client. It will survive the delivery relationship. The vendor management function establishes the business and technology management interfaces between the parties to ensure a productive relationship between the department and the vendor.

It is important to recognise that appropriate skills for these roles may not exist within the agency responsible for delivering a project. If this is the case, the cost of external resources should be included in the project’s business case.

# ICT project delivery

## Introduction

Project delivery (or implementation) involves carrying out all the plans and agreements that have been specified in the business case and through the contract agreement stages of the procurement process. It involves the actual implementation, testing, verification and transition to the business of the solution and associated benefits such that the overall aims and objective of the project are realised.

The Lifecycle Guidance for *Stage 4: Implement* provides detail on the requirements of projects during implementation and delivery and should be read as a prerequisite to this technical guidance. In addition, projects must adhere to established government policies, processes and standards, including the HVHR process that is set out in section 1.3. The following sections provide more detail on considerations and leading practice that should be taken into account when in the delivery phase of an ICT project.

## Maintain the benefit management plan

Benefit management and realisation are crucial to successful project delivery because projects are driven by the need to achieve business benefits. A benefit management plan will have been prepared as part of the business case. This should be maintained over the course of the project and used to track the realisation of benefits across the project, as well as benefits realisation costs.

The benefit management plan should also require a periodic reassessment of the business benefits, with a view to reaffirming that they are still valid, accurate and valuable, and that the project continues to meet the outcomes committed to in earlier stages of the project. Business benefit owners, as assigned in the benefit management plan, should be involved in all stages of benefit tracking and assessment as part of their overall responsibility for delivering business benefits.

## Scope management

Project scope must be actively managed throughout a project to ensure that what is delivered is appropriate to the business, reflects the endorsed business case and delivers the agreed project benefits. Changes and refinements to scope may occur and processes must be in place to ensure they are approved, managed and implemented appropriately.

DTF expects that agencies will have appropriate processes in place to manage projects to their approved scope and to ensure appropriate mechanisms exist where changes to scope are required. These processes should be detailed in the business case and negotiated into vendor contracts. The following sections outline scope activities and documentation that must be undertaken as part of scope management during the delivery of an ICT project.

### Scope documentation

Requirements within the project delivery phase need to align to the project benefits, outcomes and capabilities. They must be sufficiently detailed to support procurement, contracting, implementation and delivery tasks. The following documentation must be continuously developed and refined as part of the project delivery phase to provide a basis for technical specification, technical development, testing and handover of a solution.

##### Statement of work

The statement of work during the delivery phase is part of the contractual agreement with the solution provider. It provides an important management tracking tool to ensure the project is being delivered according to what is contractually agreed. Where changes to scope are required these should be managed through the contractually agreed scope variation process and documented in an amended statement of work, which then forms part of the amended contract for services.

##### High-level design

The high-level design should contain information about inputs, processes, delivery schedules, deliverables and costs at a more detailed level. This should break deliverables down into key elements or components, including:

* + - * + **Work breakdown structure.** A detailed description of the work, the software and hardware to be used, and the exact nature of the work.
        + **Period of performance.** The start and finish date for the project, estimates of the person days of effort for each time period, etc.
        + **Deliverables schedule.** Due dates for the deliverables of the project. This would include indicative completion dates for development, QA testing and user acceptance testing.
        + **Applicable standards.** Industry standards or other standards imposed on the project deliverables. These should include any standards such as ISO, CMM and CMMI.
        + **Acceptance criteria.** Including any quality standards that must be met, for example, zero severity 1 defects. They should also include any other conditions that must be met such as number of test cases and number of test cases executed.

Developing a high-level design may constitute a discrete stage of a complex ICT project or a significant milestone within a stage of a less complex project. The high-level design may also be an important input to a future stage of the procurement process.

##### Detailed design

Detailed design translates the statement of work and high-level design into the vendor’s detailed project plans and proposed ICT solution. This stage may include detailed discussions, interviews and workshops with business stakeholders and subject matter experts. Detailed design will document the scope in terms of both the outcome required from the solution and how the solution will meet those outcomes; stakeholders often find this easier to understand once they are able to see a visual representation of the solution.

Using a staged delivery approach, development of the detailed design may constitute a discrete project stage or a number of discrete stages in a complex ICT project. For example, the process may include proof of concept, trials or pilots and prototypes. The detailed design or components of it will also be an important input to the procurement process.

### Maintain a requirements traceability matrix

All project requirements should be traceable – from business benefit through to the specific aspects of a solution that enable that benefit to be realised and its delivery scheduled. Use of a traceability matrix clearly shows the evolution of requirements through the project. It provides an assurance tool to ensure all requirements are addressed appropriately at each stage in the project, and that they continue to align with policy and business strategy.

### Build in mechanisms to freeze requirements

At a certain point in the project it will be necessary to freeze requirements to enable solution specification and design to complete, and the solution to be implemented. Depending on the delivery method, this will either be during procurement or delivery. A requirements freeze should be supported by management and governance processes within the project.

Requirements should only be frozen when signed off by stakeholders who have accountability for and understanding of the solution. Mechanisms to ensure stakeholder understanding include:

* design documents written in appropriate language such that they are easily understood by the stakeholders (often used with customised COTS or custom developed solutions); and
* conference room pilots (presentations of prototype or semi-developed functionality to select groups of subject matter advisors, often used with the implementation of COTS solutions).

### Build in mechanisms to change requirements

The form and content of requirements will necessarily change through the project’s lifecycle. The way requirements are presented, as well as the detail they contain, will evolve throughout the project as analysis is completed and to support the next phase in the project. Where these refinements represent scope changes, they must be managed through an appropriate change control process.

Requirement changes, and therefore scope changes, may also occur due to external factors. Changes to the business, for example, may make it appropriate to incorporate changes to scope and solution requirements to ensure the project outcome can deliver the proposed business benefits. This should be recognised and supported through management and governance processes that take into account the full ramifications of the changes. An example of an appropriate requirements change control process is as follows:

* Ensure a design authority function exists within the project that is accountable for the end-to-end solution.
* Submit all changes to the design authority to enable an impact assessment to be undertaken in the context of the broader project.
* Changes endorsed by the design authority should be submitted to a change control board for review and approval.
* Any changes that impact on time, cost or quality must be escalated through project management to the governance forums for final review and approval.

### Use skilled resources

At each stage in the project lifecycle, it is important to ensure scoping and requirements specification is done by appropriately skilled and experienced people. Due to the often evolving nature of scoping requirements, the appropriate skillset for this task may not be the same throughout the project. For example, a business subject matter expert should assist in defining business benefits and outcomes, whereas a technical expert may assist in defining capability and technical requirements.

Support should be provided to subject matter advisers and the project delivery team, and provide continuity to requirements collection and management functions throughout the project. This is often a project team member performing the following tasks:

* assist in engaging the appropriate people to define requirements at each stage;
* provide techniques and support for collecting, refining, documenting and managing requirements through the full project lifecycle;
* assist in managing changes to requirements through the change control process;
* provide continued assistance to the project team in terms of requirements clarifications and supported interactions with business; and
* act as a point of contact for stakeholders to the project to discuss details of requirements or raise a change request.

### Independent review

Requirements specifications at each stage of the project should be reviewed by independent (internal or external) subject matter experts. Independent review provides advantages of a fresh perspective, new thinking and potentially a different skillset. It also provides a perspective clear of any potential bias resulting from involvement with the project or its stakeholders. It may be necessary to look outside the business for the appropriate level of experience and independence.

## Stakeholder engagement

ICT projects may impact on a large number and range of stakeholders. In order to achieve stakeholder acceptance and utilisation of the new solution, the following business readiness activities should be undertaken during project delivery. These activities build on the work already completed as part of building the business case and will assist the project to achieve successful implementation (including realisation of business benefits). They must be costed and will require funding and resources to be allocated as part of the project.

### Maintain the change management plan

A change management plan is developed as part of the business case and presents a detailed blueprint for all aspects of implementing a project into the agency. It provides a structured approach to moving individuals, teams or a whole department from a current state to a future state. It will help users and beneficiaries of a project to adopt changes to their environment. Successful change management is characterised by five principal dimensions, which should be reflected in the change management plan:

* + - * effective communication;
      * full and active executive support;
      * employee involvement;
      * organisational planning and analysis; and
      * a widespread perceived need for change.

There is a clear link between successful change management and success in implementing a complex ICT-enabled project. An agency embarking on a complex ICT or service transformation project with a significant ICT component should ensure accountability for the development and implementation of the change management plan rests with suitably experienced and skilled staff. Throughout the project lifecycle, the changes that the organisation may need to undergo to implement the project will change. As this occurs, the change management plan should be assessed and updated.

### Maintain the ICT service transition plan

As part of the business case development, an ICT service transition plan should be created. It details the way the ICT solution will be promoted from the development environment to production including dimensions such as: performance metrics (availability, uptime etc.); support arrangements (user support and maintenance); business continuity; capacity management; licensing constraints; third-party access; security; and any non-standard commercial terms with vendors. The ICT service transition plan should identify any additional training required for ICT staff.

Throughout the project as further detail is understood and changes are absorbed into the project, the ICT service transition plan should be assessed and updated to ensure it continues to reflect the solution that is being transitioned.

### Conduct a business readiness assessment

Business readiness is a measure of the preparation of an organisation undergoing change and forms a key input to decisions to proceed or not proceed with implementing the project or a stage of the project. A business readiness assessment should be conducted a number of times throughout a project, each time at a different level of detail to support a different purpose and stage in the project. For example:

* + - * during business case development to help ascertain the magnitude and cost of the transformation effort;
      * at the beginning of a delivery stage to support detailed transition planning; or
      * at the end of a project prior to service transition to gauge what levels of transition support may be required.

Business readiness assessments can take various forms, including:

* + - * measuring the general level of staff readiness by attempting to capture the awareness and perceptions of the staff undergoing change;
      * a formal go-live assessment, typically a formal document agreed between the vendor and the client to determine if an ICT solution is ready for deployment; and
      * a ‘model office’ simulation using a working prototype of operations that reflects the new environment as closely as practicable. This allows the vendor and client to validate the usefulness and effectiveness of the proposed solution, and to
        + identify and confirm process dependencies and links;
        + uncover process or security gaps;
        + confirm the planned resource model required for the transformed processes;
        + ensure that the process model and other models are integrated and synchronised;
        + confirm that process control steps are in place;
        + confirm process measurement points and links to metrics programs; and
        + support change management.

The information gathered from a business readiness assessment is used to ascertain whether required outcomes are well defined and understood, whether adequate and appropriately skilled resources are engaged, the clarity of the communication strategy, and the capability and commitment of business leaders to effect change. It is also critical that conditions for success have been established along with an appropriate monitoring processes.

## Risk management and monitoring

ICT projects have a complex risk profile due to their abstract nature, complexity and unique cost structures. Risks are often difficult to identify and quantify, and it can be a long period of time before it is apparent that a particular risk has materialised. To offset the risks of an ICT project, risk management must be an ongoing effort throughout project delivery. DTF expects that the delivery plan for an ICT project will include regular monitoring and review of risks and a clearly defined risk management strategy to enable risks to be identified, escalated and mitigated in an appropriate way.

### Maintain the risk management plan

Risks will evolve over the lifetime of the project. Some will be mitigated through the project lifecycle and new ones will emerge. The risk management plan developed alongside the business case should be monitored and updated throughout the project lifecycle.

### Risk register

A risk register should be developed and maintained throughout the project lifecycle. This should deal with the key risks that have a material probability of affecting the project. It should avoid creating an encyclopaedia of minor risks that are not material or have a small probability of adversely affecting the project.

The risk register should contain full details of each risk including the costed impact of the risk should it not be appropriately mitigated, the risk owner, and an evaluation of each risk in financial terms.

### Risk escalation

Risk escalation processes will have formed part of the risk management plan presented in the business case. Accountability for mitigating project risks rests with the governance groups. Risk management must be a key ongoing focus of the project board. Sufficient information must be presented to the project board to enable its members to monitor the significant risks and ensure that appropriate mitigation strategies are in place. Proactive and regular review of project risks should continue to occur throughout the project to ensure:

* + - * Risks are identified and have an appropriate mitigation plan in place.
      * Active monitoring is taking place to determine whether a risk has materialised. In ICT projects, this can be difficult to identify. Assistance from a ‘critical friend’ is helpful to identify where risks may have materialised.
      * Remediation action is taken immediately when a risk materialises.

Key to the success of risk management is reporting mechanisms to ensure risks are captured at all levels within the project and escalated where mitigation actions are ineffective or insufficient delegated authority exists to enable corrective action. Governance forums must have delegated authority to take action to mitigate a risk, and remediate it if needed prior to their being a significant impact on project scope, quality or cost.

## Governance

Appropriate governance structures are critical to the success of ICT projects. Formal governance is necessary to provide the appropriate forums for ongoing project control and monitoring. It also enables effective decision making regarding the boundaries for project delivery to ensure the endorsed project scope and budget are delivered.

The Lifecycle Guidance for Project Governance provides details of best practice and templates and techniques for effective project governance, and should be used for ICT projects.

