Australian Government
Digital Transformation Agency

dta

Good practice guideline: Requirements

ICT Investment Approval Process

Lean business case

Version 1.0

Digital Transformation Agency

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Purpose

The DTA has created this good practice guide with built-in examples to assist agencies in developing the requirements section of the business case template. This document provides guidance and working examples to assist with efficient and effective preparation of business cases, and ensure authors have a clear understanding of their obligations when preparing requirements. Note that this guidance should also prove useful when completing requirements definition activities for projects not required to submit a business case under the ICT Investment Approval Process (IIAP).

Who this document is for

This document is for people authoring or developing business cases. It has been developed for business analysts, product owners, and project practitioners with moderate to significant experience in requirements elicitation and/or delivering ICT projects.

Supporting documents

This document is part of a broader toolkit developed for entities developing business cases. Other documents may assist you in understanding the IIAP and the business case process.

Using these guidelines

This document should be viewed as supporting guidelines for developing the requirements section of the business case template. These guidelines should be used as supporting information rather than a specification of mandatory inclusions. The DTA is looking for requirements artefacts to effectively define functional and non-functional requirements, the user experience, and provide details of the approach to be taken to manage requirements throughout the program lifecycle. As methodologies and implementation approaches differ between agencies, the DTA does not prescribe specific formats.

These guidance materials have been developed using ICT industry standards such as the Business Analysis Body of Knowledge (BABOK) guidelines, DSDM, Agile Manifesto and other common references. Experienced Business Analysts or other practitioners with appropriate certifications (e.g. IIBA CBAP) and/or experience in applying BABOK or other standards should be familiar with the concepts discussed.

These guidance materials include mock examples throughout to provide context. Examples relate to a mock program of a work for a Federal Roadworks Register implementation. In this scenario, a COTS solution is to be utilised in conjunction with the development of web portal user interfaces and an API for data sharing purposes with local and state governments. The scenario is deliberately oversimplified for brevity and presentation purposes but should hopefully provide some useful context.

Good requirements definition and management are essential to the success of any ICT program. This document is not an exhaustive representation of best practice standards but aims to provide basic *good practice* guidance and examples.

Agencies should provide their requirements in a single artefact as part of their business case submission.

Waterfall vs Agile

The DTA regularly encounters questions relating to the level of detail provided for Agile-based programs. While Waterfall programs invest considerable effort in articulating detailed requirements upfront and are documentation intensive, an Agile approach still needs to provide sufficiently detailed requirements where areas of functional complexity exist. The second pass business case process requires that programs have their planning and design efforts to a mature state that provides evidence they can effectively manage implementation risk. This can be a contentious topic at times but a core tenet of Agile is to understand your governance obligations and that stakeholders (including the DTA) are crucial in determining the level of detail and documentation required to meet those obligations.

When choosing an implementation methodology, the complexity of requirements should be a strong consideration. The DTA has seen Agile-based programs fail where unforeseen complexity of requirements has emerged during the delivery phase, resulting in catastrophic impacts on program timelines, budgets, and benefits realisation. Delaying the definition of complex business rules or requirements until delivery sprints commence is a high risk and often disastrous approach.

A Waterfall SDLC (or hybrid 'Agile') implementation approach mandates that requirements are validated and baselined before the implementation phase commences. One benefit of Waterfall or hybrid approaches versus Agile is the ability to identify unforeseen areas of complexity much sooner, creating an opportunity for the program to pivot as necessary. This is the recommended approach where there are complex requirements such as business rules engines, large scale legislative change, complex integration requirements, or extensive data requirements.

Agile is much better suited to programs that are less functionally complex or more user experience intensive, such as content-heavy apps and websites. Agile projects often combine requirements elicitation, design, and development efforts within sprints, relying on collaboration and communication instead of producing detailed documentation. The DTA recommends that Agile programs follow a "just enough process" principle where areas of requirements complexity are defined well in advance in dedicated design sprints. More user-focused requirements gathering may involve the use of functional prototypes, proof of concepts, or alpha/beta modelling instead of developing detailed specifications. Still, these activities should be conducted in advance of coming forward for funding of the implementation phase. This is to inform the requirements and overall business case of any lessons learned.

Obligations

As general rules for programs seeking funding for implementation, requirements should be produced to a sufficient level of detail to:

- Clearly outline the functional and non-functional requirements to a sufficient level of detail relative to the complexity of the solution required. While basic functions do not necessarily require highly detailed functional definitions, areas of complexity, such as business rules engines, should be specified up-front.
- For agile programs: include the Expected Product and Minimum Viable Product. The Epics and User Stories that form the EP/MVP should include acceptance criteria.
- Show prioritisation of requirements has been applied with feasibility considered. When determining prioritisation, consider that any non-delivery of a mandatory requirement may result in the program being considered to have failed to meet its objectives.
- Support the standard 10% budget contingency allowed for digital and ICT investments. Should complex requirements not be defined at the point of seeking funding for implementation, this may result in a 'not-support' position from the DTA due to the risk to the program budget caused by ambiguity.
- Advise the intended user experience, journeys, or processes to be supported. The Digital Service Standards require that digital solutions be user-centric by design.
- Communicate the method of requirements management used to elicit requirements from stakeholders and ensure solutions meet requirements. Effective scope management and requirements traceability are essential measures to ensure programs meet objectives.
- Support an RFP or Tender process to source COTS solution and/or engage an implementation partner (which may or may not also be the solution vendor). Once onboard, it is expected that the vendor will need to rationalise/groom requirements, which should be included in the program schedule.
- Demonstrate that requirements have been subject to technical, legal, ethical and compliance validation. The DTA strongly recommends that governance, risk, and compliance practitioners are embedded within the program, including scrum teams.
- Include the findings or any alpha or beta activities such as prototypes, pilots, or proof of concepts.

For first pass business cases, the obligation is to provide high level requirements at a level of detail sufficient to support the options analysis efforts. In general, a clear demonstration of functional capabilities required should be provided as a minimum.

Requirements specification

In this section of the document, examples and guidance is provided for information you could include in developing your requirements section.

Introduction

Guidance

The introduction specifies the requirements for investment and the rationale.

Example

This document specifies the requirements for *[insert proposed Digital or ICT investment]*, a strategic investment to [insert rationale]. The document supports the [business case title] that outlines the rationale, benefits, costs, risks, and options for the investment.

Title: Modernising Roadworks: A Map-Based Federal Register for Efficiency and Transparency. This document specifies requirements for a Federal Roadworks Register, a strategic investment to modernise the roadworks management landscape and deliver efficiency and transparency benefits for all stakeholders.

Scope and objectives

Guidance

The scope of the requirements specification is to define the user needs and expectations.

Example

The scope of the requirements specification is to define the user needs and expectations for the map-based Federal Roadworks Register, a web-based platform that enables companies and councils to submit roadworks applications, federal, state, and local authorities to assess roadworks applications, and the public to access real-time information on roadworks progress.

In addition, detailed business rules and conditions for workflow capabilities have been defined in addition to data requirements for integration with local and state authority roadworks registers.

The objectives of the requirements specification are to:

- Provide a clear and concise description of the user requirements for the system using a consistent and traceable format.
- Ensure that the user requirements align with the business case objectives and the solution architecture design.
- Facilitate the communication and validation of the user requirements with the stakeholders and the solution providers.
- Provide a basis for the development, testing, and acceptance of the system.

Stakeholder engagement and analysis

Guidance

Summarise the approach taken for stakeholder engagement during requirements elicitation and ongoing requirements management throughout the implementation lifecycle. ICT investments under the IIAP are required to comply with the Digital Service Standards, which mandate that a user-centric approach is taken to digital design. Strategic and Leadership consultation should occur to validate requirements and ensure scope alignment with strategic objectives.

Outline how the program has complied with these obligations in defining the requirements and designing the solution. This should include engagement at both a user or practitioner level and strategic input from leadership or other key stakeholders.

Example

Requirement gathering activities for the Federal Roadworks Register have included the following.

Engagement activities
Example: Requirement gathering activities for the Federal Roadworks Register have included the following: • Stakeholder workshops with a multi-disciplined group of potential solution users, including assessment practitioners, roadworks applicants, regulatory SMEs, strategic leaders, and other impacted parties at a federal, state, and local level. • Extensive Industry consultation sessions have been conducted as part of legislation change, including by extension, a technical analysis of capability maturity and uplift needed. • Desktop and market research was conducted, including jurisdictional comparisons and preliminary solution options analysis. • Findings from the above were presented to the program steering committee and executive leadership for endorsement to proceed.

The following table identifies and analyses the key stakeholders for the system, their roles, interests, and influence.

Stakeholder	Role	Interest	Influence
Federal Agencies	Responsible for roadworks management on federal roads.	Interested in improving the efficiency and transparency of roadworks management, reducing traffic disruption and costs, and enhancing collaboration with other authorities.	High influence, as they are the primary users and owners of the system.
State and Local Agencies	Responsible for roadworks management on state and local roads.	Interested in improving the efficiency and transparency of roadworks management, reducing traffic disruption and costs, and enhancing collaboration with other authorities.	High influence, as they are the primary users and providers of data for the system.
Roadworks Applicants	Parties seeking approval for roadworks on federal roads.	Interested in submitting roadworks applications, tracking progress, and receiving timely approvals.	Moderate influence, as they are the incidental users and customers of the system.
General Public	Commuters or third parties seeking information on roadworks on federal roads.	Interested in accessing real-time information on roadworks progress, traffic disruption, and alternative routes.	Low influence, as they are the incidental users and beneficiaries of the system.

High level capabilities

Guidance

List the high-level capabilities that should be available to users. This section should give the reader a clear understanding of the key functional aspects of the solutions needed.

Example

Functional capability	Description	Candidate solution
Submission portal	A portal for companies and councils to submit roadworks applications.	Web-based portal with secure login and application submission form.
Assessment portal	A portal for federal, state, and local authorities to assess roadworks applications.	Web-based portal with secure login and application assessment form.
Case management and workflow	A system for managing and tracking roadworks applications through the approvals process.	Customisable workflow management system with real-time updates.
Data integration with state and local council roadworks registers	A system for sharing and integrating data between federal, state, and local roadworks registers.	API-based data sharing and integration system.

Functional requirements (Waterfall)

Guidance

The following table provides functional requirements expressed in a format compliant with the Business Analysis Body of Knowledge (BABOK) guidelines. The level of detail provided should be sufficient for technical and non-technical audiences to understand the functional capabilities required and the outcomes each should deliver. Where complex requirements or business rules exist (e.g. workflow conditions and rules, entitlements business rules), these should be summarised here and then expanded upon in a subsequent section or document (e.g., a functional specification). The DTA strongly recommends that where moderate or higher complexity exists, such requirements/rules are defined up-front to inform the scope and planning of implementation and technical solutions.

Example

Req ID	Requirement description	Priority	Acceptance criteria	Assumptions	Dependencies	Source
FR-01	The solution shall allow users to submit roadworks applications through a web-based portal.	High	The solution shall display a submission form with mandatory and optional fields, validate the user input, and generate a unique application ID upon submission.	The portal is integrated with the federal roadworks database and the GIS service.	None	User research stakeholder interviews.
FR-02	The solution shall display the current status of the application (e.g. submitted, pending, approved, rejected) and the estimated completion date.	High	The solution shall update the status and the completion date based on the workflow rules and the approval process.	The portal is integrated with the federal roadworks database and the workflow management system.	FR-01	User research, stakeholder interviews.
FR-03	The solution shall display the details of the application and allow the user to modify or delete the application, subject to approval rules.	Medium	The solution shall show the application details in a read-only mode and provide buttons to edit or delete the application, depending on the status and the user role.	The portal is integrated with the federal roadworks database and the workflow management system.	FR-01, FR-02	User research, stakeholder interviews.
FR-04	The solution shall provide the functionality to attach files to the application, store them in the federal roadworks database, and retrieve them on demand.	Medium	The solution shall allow the user to upload files of different formats and sizes, associate them with the application ID, and display them as links or thumbnails on the application details page.	The portal is integrated with the federal roadworks database and the document management system.	FR-01	User research, stakeholder interviews.

FR-05	The solution shall display a map with pins indicating the roadworks locations, and provide the option to zoom in and out, and view the details of each roadwork.	Low	The solution shall show a map with the roadworks locations, allowing the user to see the roadwork details and supporting case materials.	The portal is integrated with the federal roadworks database and the GIS service.	FR-01	User research, stakeholder interviews.
FR-06	The solution shall provide the capability for federal, local, and state authorities to share roadworks data and information in real time.	High	The solution shall pass federal case data to local and state roadworks registers in real time.	The portal is integrated with the federal, local, and state roadworks databases.		Legislative requirement, stakeholder interviews.
FR-07	The solution shall provide read-only access to summary information of local and state-based scheduled roadworks (on non-Federal roads) for coordination purposes.	Medium	The solution shall allow authorities to view local and state-based existing approved roadworks on non-federal roads.	The portal is integrated with the federal, local, and state roadworks databases.	FR-06	Legislative requirement, stakeholder interviews.

Functional requirements (Agile)

Guidance

Requirements elicitation for Agile programs are usually expressed from a user perspective in the form of user stories, which are short descriptions of the desired outcomes or functionality. They are generally less detailed than functional requirements and offer flexibility when designing solutions, allowing them to evolve iteratively. However, they are less suited when requirements are more specific and complex, such as the use of complex business rules in a calculation or entitlements engine.

The DTA recommends that user stories should follow the INVEST principles defined in the example below.

Example

Independent	Stories should be as independent as possible from other stories, to allow them to be moved around with minimal impact and potentially to be implemented independently. If stories are tightly dependent, consider combining them into a single-user story.
Negotiable	Stories are not a contract. They are 'placeholders' for features that the team will discuss and clarify near the time of development.
Valuable	Stories should represent features providing clear business value to the user/owner of the solution and should be written in an appropriate language. They should be features, not tasks.
Estimable	Stories need to be clear enough to estimate (for the appropriate timeframe), without being too detailed.
Small	Stories should be small enough to be estimated. Larger "Epic" stories should be broken down into smaller User Stories as the project progresses. The stories after splitting still follow the INVEST criteria.
Testable	Stories need to be worded clearly and specifically enough to be testable.[1]

Example

Roadworks application

- As a user, I want to be able to apply for approval to conduct roadworks at a specific location and time on a federal road.

User Stories

ID	User story	Acceptance criteria	Priority (MoSCoW)	Estimate (# Sprints)
US-001	As a user, I want to create a new application with location details, times, and details of the works to be completed so that I can obtain permission to proceed with roadworks.	The user can access the application form, fill in the required fields, and apply successfully. The application form includes fields for location details, times, and details of the work to be completed. The user receives a confirmation message upon successful submission. The submitted application is saved in the system and can be accessed by the relevant authorities for review.	M	4
US-002	As a user, I want to edit an existing application so that I can update its details or provide more information.	The user can access the existing application, make changes to the fields, and save the changes successfully. The updated application is saved in the system and can be accessed	M	1

[1] www.agilebusiness.org/dsdm-project-framework/requirements-and-user-stories.html

		by the relevant authorities for review.		
US-003	As a user, I want to delete an application that is no longer relevant or necessary so the register is accurate.	The user can access the existing application and delete it successfully. The deleted application is removed from the system and is no longer accessible by the relevant authorities.	S	1
US-004	As a user, I want to see a unique identifier for each application so that I can easily refer to it or search for it.	The user can see a unique identifier for each application in the list or map view. The user can use the unique identifier to search for a specific application.	C	1
US-005	As a user, I want to switch between a list view and a map-based view of my applications, so that I can view information based on work priorities or location of works.	The user can toggle between two views: a list view and a map-based view. The list view shows the applications in a tabular format with relevant information such as name, status, deadline, etc. The map-based view shows the applications as pins on a map, with colour coding indicating their status. The user can click on an application in either view to see more details or perform actions.	S	4
US-006	As a user, I want to receive notifications of upcoming deadlines and overdue tasks related to my application so that I can stay on top of my responsibilities and avoid missing any deadlines.	The user receives email notifications at regular intervals (e.g. daily, weekly) with a summary of their upcoming deadlines and overdue tasks. The user can customise the frequency and content of the notifications in the settings. The user can mark a task as completed or snooze a notification from the email or the dashboard.	S	3
US-007	As a user, I want to view my applications at any time and from any device so I can work remotely or at any time of my choosing.	The user can access the system via a web browser on any device (desktop, laptop, tablet, smartphone). The system has a responsive design that adapts to different screen sizes and orientations. The user can log in securely with their credentials and access their applications and data.	S	4

Functional requirements prioritisation

Guidance

Irrespective of the implementation methodology, effective requirements prioritisation is an essential part of good governance and delivery feasibility. The DTA is often presented with requirements artefacts with all (or nearly all) requirements listed as mandatory. This is poor practice as can result in impacts to benefits realisation should budget or scheduling pressures necessitate a change in scope. When prioritising requirements, it is good practice to use methods like MoSCoW, which sorts features into 4 categories:

Must have: the essential features or requirements that must be delivered for the solution to be considered complete

In Agile, any mandatory requirements are deemed to form part of the Minimum Viable Product.

Should have features that are non-essential but offer great value-add capabilities

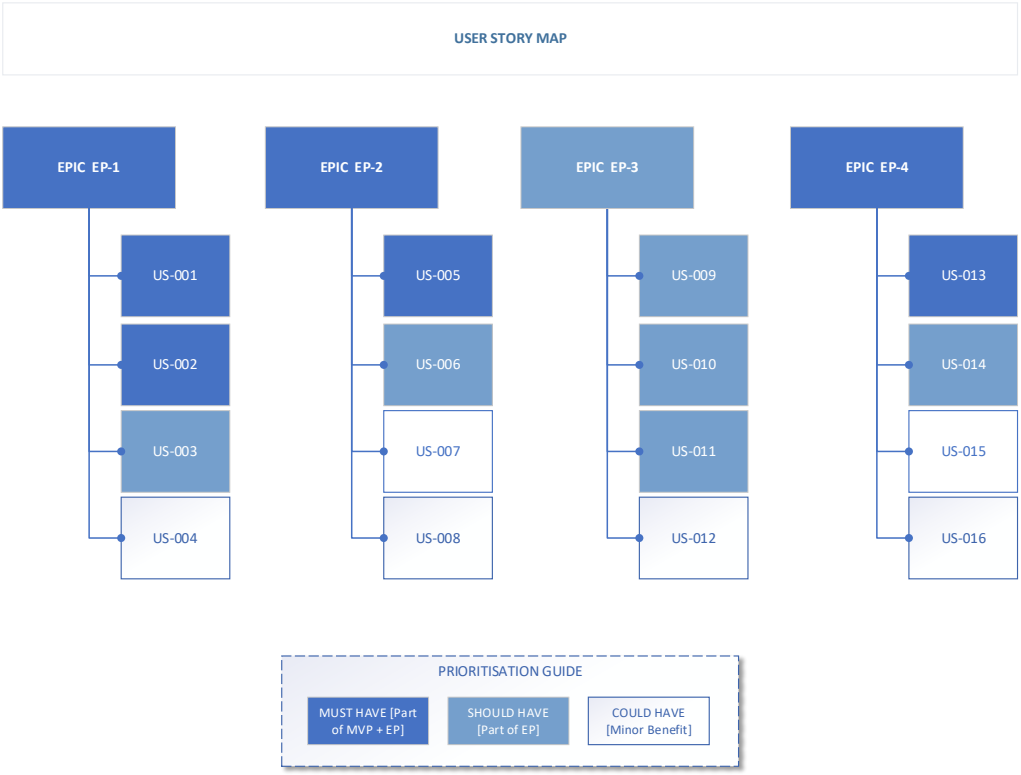
In Agile, these requirements plus any Mandatory Requirements form the Expected Product (also known as a Minimum Marketable Product).

Could have features that offer a degree of additional capability but will not materially impact benefits realisation.

Won't have features that have been designed as out of scope or that do not offer benefit to users.

Agile programs are required to provide details of their Minimum Viable Product and, ideally, an Expected Product. A basic story map is a useful visual tool to provide this information.

Example


USER STORY MAP
EPIC EP-1
US-001
US-002
US-003
US-004
EPIC EP-2
US-005
US-006
US-007
US-008
EPIC EP-3
US-009
US-010
US-011
US-012
EPIC EP-4
US-013
US-014
US-015
US-016
PRIORITISATION GUIDE
MUST HAVE [Part of MVP + EP]
SHOULD HAVE [Part of EP]
COULD HAVE [Minor Benefit]

Non-functional requirements

Guidance

Non-functional requirements are the criteria that define the overall qualities or attributes of a system rather than its specific behaviour or functionality. These types of requirements provide essential context for solution architects and developers to scale and identify fit for purpose solutions that can meet the business objectives, support user demand, and offer appropriate security. Note that Accessibility is a mandatory consideration for all solutions and should be assessed accordingly.

Example

ID	Category	Requirement	Measurement
NFR-01	Usability	The solution should have a user-friendly interface that allows users to search, filter, and view roadwork information easily.	The solution should have a response time of less than 5 seconds for any user query. The solution should have a satisfaction rate of at least 80% in user surveys.
NFR-02	Accessibility	The solution should be accessible from any device with an internet connection and a web browser.	The solution should conform to the Web Content Accessibility Guidelines (WCAG) 2.1 Level AA. The solution should have a cross-browser compatibility of at least 90%.
NFR-03	Security	The solution should ensure the security and integrity of the roadworks data and prevent unauthorised access or modification.	The solution should use encryption, authentication, and authorisation mechanisms to protect the data. The solution should have a breach detection and mitigation plan. The solution should have a data backup and recovery plan.
NFR-04	Privacy	The solution should comply with the federal data protection and privacy regulations.	The solution should adhere to the principles of data minimisation, consent, transparency, and accountability. The solution should have a privacy policy and a cookie policy. The solution should allow users to opt out of data collection and processing.
NFR-05	Accuracy	The solution should provide accurate and up-to-date information on the current and planned roadworks across the country.	The solution should update the data at least once a day. The solution should have a data quality assurance process. The solution should have a data source verification process.
NFR-06	Availability	The solution should have high availability and reliability and minimise downtime and errors.	The solution should have an uptime of at least 99.9%. The solution should have a fault tolerance and redundancy

			mechanism. The solution should have a monitoring and alerting system.
NFR-07	Scalability	The solution should have a scalable architecture that can handle increasing traffic and data volumes.	The solution should have a load balancing and caching mechanism. The solution should have a performance testing and optimisation process. The solution should have a capacity planning and resource allocation process.
NFR-08	Feedback	The solution should have a feedback mechanism that allows users to report issues, errors, or suggestions.	The solution should have a feedback form and a contact email. The solution should have a feedback response and resolution process. The solution should have a feedback analysis and improvement process.

Detailed functional requirements/business rules

Guidance

Where functional requirements are sufficiently complex to merit a more detailed definition, these should be specified prior to solution design and/or vendor engagement activities. All complex requirements must be subjected to technical and feasibility validation to identify and scale solutions appropriately. Functions such as the calculation of entitlements or complex workflows are good examples of where this should occur to remove ambiguity.

For highly complex solutions, producing a dedicated functional specification may be merited.

Example

Rule ID	Rule description	Input	Output	Exception
BR-01	A user can submit an application using the online form.	Application form with required fields.	Application submission confirmation and reference number.	If any required field is missing or invalid, the solution will display an error message and prevent the submission.
BR-02	The solution will assign the submitted application to an assessor based on	Submitted application and assessor pool.	Assigned application and assessor notification.	If no assessor is available, the solution will queue the application and assign it

	availability and workload.			when an assessor becomes available.
BR-03	The assessor will review the application and determine the outcome.	Assigned application and assessor credentials.	Outcome of the application: approval, decline, or request for further information.	If the assessor needs more time or information to make a decision, they can save the application as pending and resume it later.
BR-04	The solution will notify the submitting user of the outcome of the application.	Outcome of the application and submitting user contact details.	Outcome notification email or SMS to the submitting user.	If the notification fails, the solution will retry after a certain interval and log the failure.
BR-05	If the outcome is a request for further information, the submitting user can provide the requested information using the online form.	Requested information and application reference number.	Information submission confirmation and updated application status.	If the requested information is not provided within a specified timeframe, the application will be automatically declined.
BR-06	The solution will reassign the updated application to the same assessor who requested the information.	Updated application and previous assessor details.	Reassigned application and assessor notification.	If the previous assessor is not available, the solution will assign the application to another assessor.
BR-07	The assessor will review the updated application and determine the final outcome.	Reassigned application and assessor credentials.	Final outcome of the application: approval or decline.	None.
BR-08	The solution will notify the submitting user of the final outcome.	Final outcome and submitting user contact details.	Final outcome notification email or SMS to the submitting user.	If the notification fails, the solution will retry after a certain interval and log the failure.
BR-09	The solution must enforce a legislated rule where federal, state, and local assessments must be conducted within for 5 business days, per review cycle.	Review period SLA enforcement.	Reviews must be completed within 5 business days of submission.	Where a review has not been completed within the SLA period, the case must be sent to an escalation queue for action.

Data requirements

Guidance

Requirements relating to specific data needs or integration should be defined using a data dictionary or equivalent mechanisms. This should specify the data objects, formats, frequency, and direction flow of shared or sourced data. This is useful for designing APIs or other integration functions that are required. Quantifying data traffic is also useful when scaling solutions.

Example

Data object	**Roadworks application (Case)**		**Estimated traffic**	**1000 records per day**	**Data flow:**	**Inbound/outbound**	
Data element	**Description**	**Data type**	**Format**	**Validation rules**	**Source**	**Update frequency**	**Data owner**
Roadwork ID	A unique identifier for each roadwork project.	Integer	N/A	Must be a positive integer.	Local, state, and federal roadworks databases	Daily	Local, state, and federal roadworks authorities
Location	The location of the roadwork, including the state, city, and specific road or highway.	Text	City, State	Must be a valid city and state combination.	Local, State, Federal Roadworks database	Daily	Local, State, Federal Roadworks Authority
Start date	The planned start date of the roadwork.	Date	MM/DD/YYYY	Must be a valid date.	Local, State, Federal Roadworks database	Daily	Local, State, Federal Roadworks Authority
End date	The planned end date of the roadwork.	Date	MM/DD/YYYY	Must be a valid date.	Local, State, Federal Roadworks database	Daily	Local, State, Federal Roadworks Authority
Description	A brief description of the roadwork, including	Text	N/A	N/A	Federal Roadworks database	Daily	Federal Authority

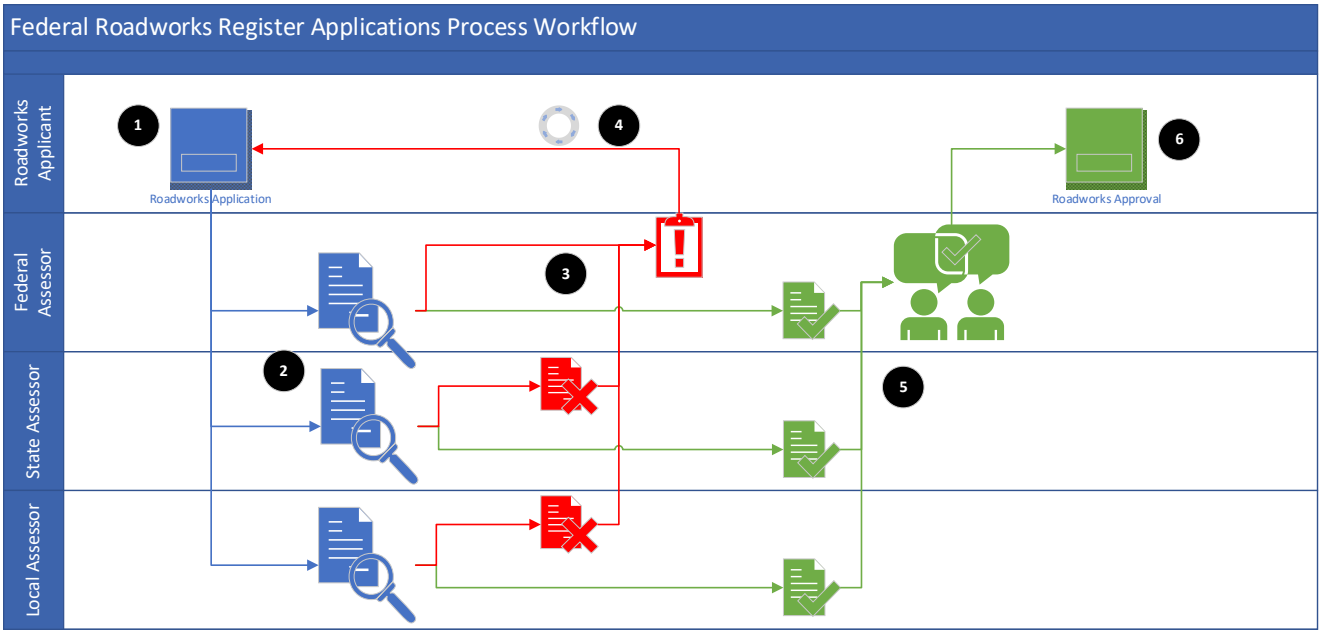
	the type of work being done and the purpose of the project.						
Status (Federal)	The current status of the roadwork, such as planned, in progress, or completed.	Text	N/A	Must be one of: planned, in progress, completed.	Federal Roadworks database	Daily	Federal Authority
Status (Local, State)	The Approved-only status of current or upcoming roadworks	Text	N/A	Must be one of: planned, in progress, completed.	State, Local Roadworks database	Daily	State, Local Authority
Contractor	The name of the contractor responsible for the roadwork.	Text	N/A	N/A	Roadworks database	Daily	Federal Authority
Contact information	Contact information for the contractor, including phone number and email address.	Text	N/A	Must be a valid phone number and email address.	Roadworks database	Daily	Federal Authority
Local authority	The name of the local authority responsible for overseeing the roadwork.	Text	N/A	N/A	Roadworks database	Daily	Federal Authority
State authority	The name of the state authority responsible for overseeing the roadwork.	Text	N/A	N/A	Roadworks database	Daily	Federal Authority
Federal authority	The name of the federal authority responsible for overseeing the roadwork.	Text	N/A	N/A	Roadworks database	Daily	Federal Authority

User experience

Requirements artefacts should include a user experience, user journey, user interface requirements or similar content for solution architects and/or solution providers to understand the user needs. Displaying these requirements in visual terms using diagrams, wireframes, prototypes, or process flows allows the reader to visualise how users need to interact with a solution.

Depending on the nature of the requirements, the user experience or journey can be expressed in different ways. For example, solutions that are intended to be more functional and business rule intensive will benefit more from the use of process or data flows. In contrast, solutions that are intended to offer a rich user experience can benefit from the development of wireframes or functional prototypes to offer suggested functionality.

Example



The following table outlines the required workflow for the submissions and assessment process for roadworks applications the solution needs to submit.

ID	Workflow status	Description
1	Submission	The applicant submits a roadworks application, including all required data and supporting documentation.
2	Assessment	Federal, State, and Local Assessors review the application.
3	Rejection/exception	Any or all of the Assessors have rejected the application or requested further information and resubmission.
4	Exception notification	The applicant is notified of the exception outcome, provides additional information, resubmits the application, or accepts the outcome and does not resubmit. [Note: an applicant may resubmit the application multiple times]
5	Approval	Federal, State, and Local Assessors each approve the application. The workflow only continues once approval is provided at all levels, with final approval and quality checks conducted at a federal level.
6	Approval notification	The applicant is notified of the approval and authorised to progress roadworks.

User base and segmentation

Guidance

Provide details of users benefiting from or impacted by the ICT investment. This should include cohort or segment details to describe impacted user groups. Quantification of these user cohorts or groups assists with assessing scalability.

Example

Segment/cohort	Description	Est # users	Additional details
Federal agencies	Federal agencies responsible for roadworks management.	1000	Core users of the platform. 5 Role types identified.
State and local agencies	State and local agencies responsible for roadworks management.	5000	Core users of the platform. 5 Role types identified.

Roadworks applicants	Parties seeking approval for Roadworks.	10000	Incidental users. 3 Role types identified.
General public	Commuters or third parties seeking information regarding federal roads (e.g. traffic disruption).	100000	Incidental users. 1 role type required.

Requirements management and traceability

Guidance

Requirements must be actively managed throughout the lifecycle of an ICT program to assist with the management of delivery risk. Effective change management, use of requirements traceability, and active management of solution providers are crucial to achieving successful outcomes. Define the approach to be taken during implementation for effective requirements management.

The contestability review process will focus heavily on the approach to requirements management as this is often overlooked as a source of implementation risk.

Example:

Requirements management	Activity description	Accountable role/individual
Change Management	Stakeholder consultation regarding any scope deviation through the change management process. This will include consultation with requirements owners as part of the formal impact assessment for change requests.	Delivery Lead, Lead Business Analyst
Requirements traceability	Requirements were baselined in the design phase and entered a requirements traceability matrix following technical validation. Solution components for each requirement have been stated, and the matrix will be maintained throughout implementation. Test cases for each requirement will be entered, as will change request identifiers for those removed from the scope.	Delivery Lead, Lead Business Analyst
Vendor Management	Solution providers will be actively managed through the implementation by internal program resources, including business analysts and solution architects, to ensure requirements are delivered.	Delivery Lead, Lead Business Analyst

One of the key benefits of following a Waterfall SDLC methodology for ICT projects is that requirements traceability is relatively easy to undertake and provides transparency throughout solution implementation. Once requirements are baselined in the design phase, a requirements traceability matrix can be maintained that demonstrates functional requirements have successfully been delivered and tested. Alternatively, the requirements traceability matrix provides the ability to identify requirements that have not been delivered either through change management protocols or have been missed.

Example

Requirement ID	Requirement description	Requirement priority	Requirement status	Solution component	Test cases
FR 1.1	The solution shall provide a secure login interface for authorised users.	High	Implemented	Authentication module	T01, T02, T03
FR 1.2	The solution shall allow authorised users to reset their passwords.	High	Implemented	Authentication module	T04, T05, T06
FR 1.3	The solution shall allow authorised users to change their passwords.	Medium	Implemented	Authentication module	T07, T08, T09
FR 2.1	The solution shall enable authorised users to create, edit, and delete roadworks applications.	High	Implemented	Roadworks application module	T10, T11, T12, T13
FR 2.2	The solution shall validate the roadworks applications against predefined business rules.	High	Implemented	Roadworks application module	T14, T15, T16
FR 2.3	The solution shall generate an application reference number for each roadworks application.	Low	Implemented	Roadworks application module	T17, T18
FR 3.1	The solution shall allow authorised users to view the status of their roadworks applications.	High	Implemented	Roadworks application module	T19, T20, T21

FR 3.2	The solution shall notify the applicant of the approval or rejection of their roadworks applications.	High	Implemented	Notification module	T22, T23, T24
FR 4.1	The solution shall allow authorised users to search for roadworks applications by various criteria.	Medium	Implemented	Search module	T25>, T26, T27
FR 4.2	The solution shall allow authorised users to export the search results in various formats.	Low	Not Delivered (CR-03)		
FR 5.1	The solution shall provide a dashboard for authorised users to view key performance indicators and statistics.	Medium	Implemented	Dashboard module	T31, T32, T33
FR 5.2	The solution shall allow authorised users to customise the dashboard according to their preferences.	Low	Not Delivered (CR-08)		